

LIZ ELSWICK
DEPUTY JUDGE/EXEC

RANEE BRUCE
FINANCE OFFICER/ADMIN.ASST.

CHARLENE JACOBS
TREASURER

BRENDA MAPEL
DIRECTOR OF FINANCE



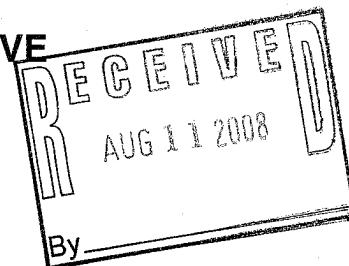
CLARK COUNTY COURTHOUSE
34 SOUTH MAIN - ROOM 103
WINCHESTER, KENTUCKY 40391

Ph: 859-745-0200
Fax: 859-737-5678

OFFICE OF THE
CLARK COUNTY JUDGE/EXECUTIVE
HENRY BRANHAM

August 5, 2008

KPDES Branch
Kentucky Division of Water
14 Reilly Rd.
Frankfort, KY 40601



Re: Permit Modification; KPDES – KY0091715; WMU/Clark County; Winchester, KY

To Whom It May Concern:

Enclosed is an application to modify our existing KPDES Permit No. KY0091715. This submittal includes Form 1, Form C and attachments. The purpose of the modification is to add an additional waste stream to Outfall #002. No changes are being proposed for existing Outfall #001.

Clark County, with the aid of the Kentucky Division of Waste Management and the Finance Cabinet, is building a wetlands treatment facility to treat landfill wastewater from the WMU/Old Clark County (OCC) Landfill, which is currently being trucked to the WMU Wastewater Treatment Plant. We are also improving the cap on the OCC Landfill, which is anticipated to reduce the volume of water generated from the landfill. These measures are anticipated to save the county a considerable sum of money that is spent annually to truck and treat the landfill wastewater. Additionally, this solution provides a long-term, more sustainable way to handle the landfill wastewater. A description of the wetlands treatment system is included with the application. The wetlands treatment facility/OCC cap improvements are anticipated to be constructed by November 2008.

Your timely review and approval of this permit modification would be greatly appreciated. Please call Ram Vuddagiri, PE (The Corradino Group) at 502.587.7221 or myself if you have any questions regarding this application.

Sincerely,

The Honorable Henry Branham
Clark County Judge/Executive

EMT:kam

Enclosure

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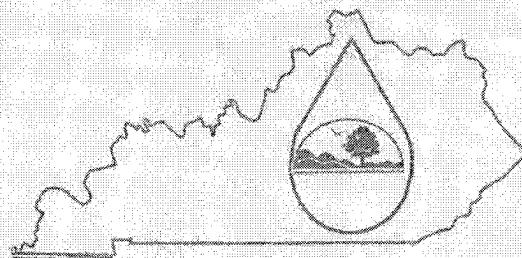


KPDES FORM 1

805

KENTUCKY POLLUTANT DISCHARGE
ELIMINATION SYSTEM

PERMIT APPLICATION



This is an application to: (check one)

- Apply for a new permit.
 Apply for reissuance of expiring permit.
 Apply for a construction permit.
 Modify an existing permit.

Give reason for modification under item II.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Short Form C

For additional information contact:

KPDES Branch (502) 564-3410

AGENCY
USE

0091715

I. FACILITY LOCATION AND CONTACT INFORMATION

A. Name of business, municipality, company, etc. requesting permit
Clark County

B. Facility Name and Location

Facility Location Name:

WMU/Clark County Landfill

Facility Location Address (i.e. street, road, etc.):

Miller Hunt Road

Facility Location City, State, Zip Code:

Winchester, Clark County, KY

C. Facility Owner/Mailing Address

Owner Name:

Clark County

Mailing Street:

34 South Main Street

Mailing City, State, Zip Code:

Winchester, KY 40391-0200

Telephone Number:

859-745-0200

II. FACILITY DESCRIPTION

A. Provide a brief description of activities, products, etc:

See Attached

B. Standard Industrial Classification (SIC) Code and Description

Principal SIC Code & Description: 4953 - Refuse System

Other SIC Codes: NEL 4953 Refuse Systems

III. FACILITY LOCATION

A. Attach a U.S. Geological Survey 7 1/2 minute quadrangle map for the site. (See instructions)

B. County where facility is located: Clark City where facility is located (if applicable): Winchester

C. Body of water receiving discharge:
Unnamed Tributary to Stoner Creek

D. Facility Site Latitude (degrees, minutes, seconds): 37.9775 Facility Site Longitude (degrees, minutes, seconds): -84.092222

E. Method used to obtain latitude & longitude (see instructions): Interpolation Map

F. Facility Dun and Bradstreet Number (DUNS #) (if applicable): NA

IV. OWNER/OPERATOR INFORMATION	
A. Type of Ownership: <input checked="" type="checkbox"/> Publicly Owned <input type="checkbox"/> Privately Owned <input type="checkbox"/> State Owned <input type="checkbox"/> Both Public and Private Owned <input type="checkbox"/> Federally owned	
B. Operator Contact Information (See instructions)	
Name of Treatment Plant Operator: Winchester Municipal Utilities	Telephone Number: (859) 744-5434
Operator Mailing Address (Street): 150 N. Main Street	
Operator Mailing Address (City, State, Zip Code): Winchester, KY 40392-4177	
Is the operator also the owner? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the operator certified? If yes, list certification class and number below. Yes <input type="checkbox"/> No <input type="checkbox"/>
Certification Class:	Certification Number:

V. EXISTING ENVIRONMENTAL PERMITS		
Current NPDES Number: KY0091715	Issue Date of Current Permit: March 1, 2003	Expiration Date of Current Permit: January 31, 2008
Number of Other Permit Received: One (1)	Date of Original Permit Issuance: April 17, 1989	Sludge Disposal Permit Number: .
Kentucky DOW Operational Permit #:	Kentucky DSMR# Permit Number(s):	

C. Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	N/A	
Solid or Special Waste	N/A	
Hazardous Waste - Registration or Permit	N/A	

VI. DISCHARGE MONITORING REPORTS (DMRs)	
KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). The information in this section serves to specifically identify the department, office or individual you designate as responsible for submitting DMR forms to the Division of Water.	
A. Name of department, office or official submitting DMRs:	Winchester Municipal Utilities
B. Address where DMR forms are to be sent. (Complete only if address is different from mailing address in Section I.)	
DMR Mailing Name:	Winchester Municipal Utilities
DMR Mailing Street:	150 N. Main Street
DMR Mailing City, State, Zip Code:	Winchester, KY 40392-4177
DMR Official Telephone Number:	(859) 744-5434

VII. APPLICATION FILING FEE

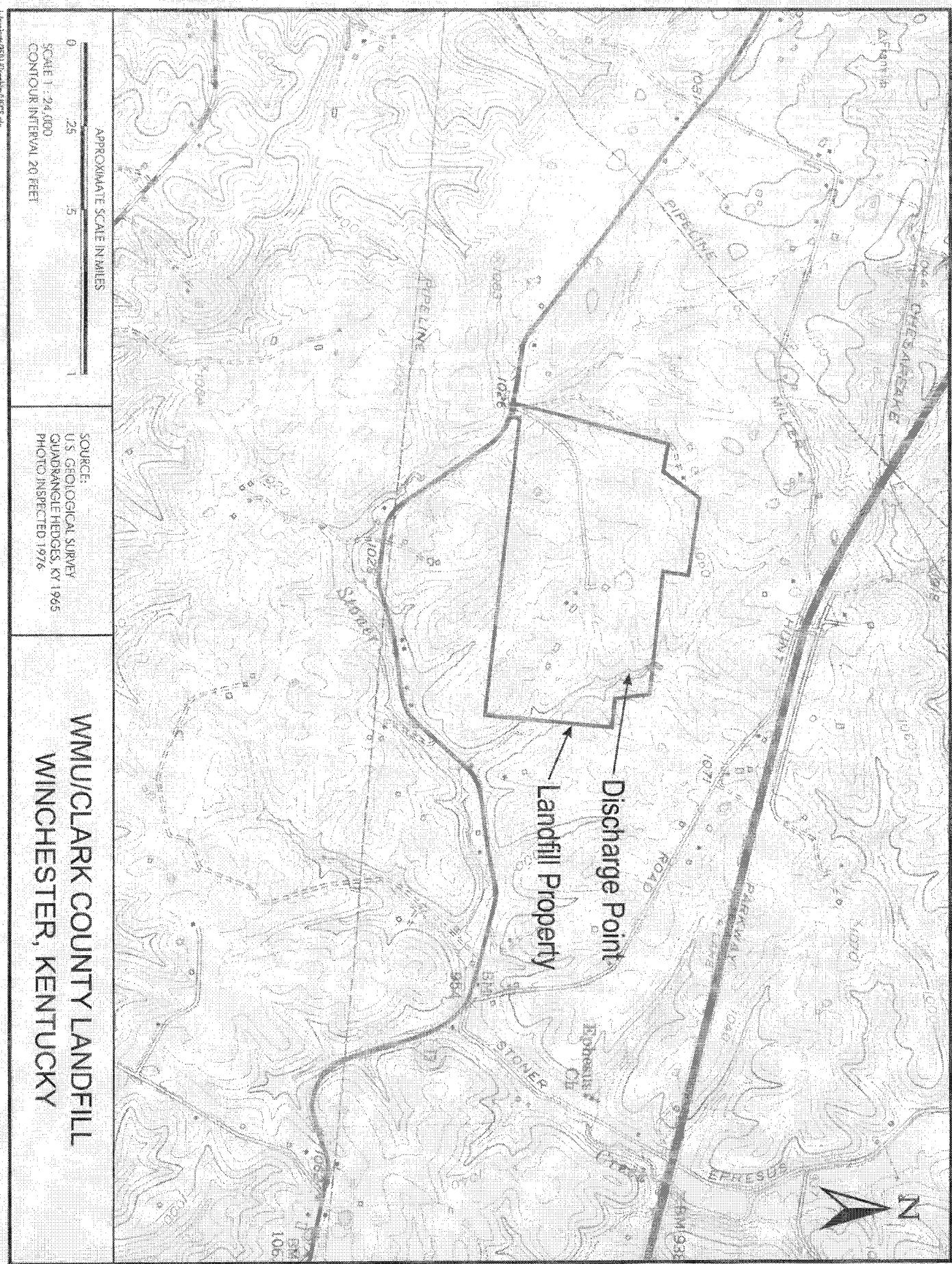
KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount. Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:	Filing Fee Enclosed:
Publically-owned treatment works	N/A

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): The Honorable Henry Branham Judge/Executive	TELEPHONE NUMBER (area code and number): (859) 745-0200
SIGNATURE 	DATE: 8-5-08



Facility Description

The WMU Landfill is located on KY 15 approximately 4.5 miles east of Winchester in Clark County, Kentucky. The landfill contains two distinct sections that cover approximately 112 acres. The old section, formerly known as the Old Clark County (OCC) Landfill, was operated from about 1967 until the 1980s, when it was graded and vegetated. The newer section, known as the WMU Landfill, operated from the early 1970s to about 1992. The landfills collectively were operated under Kentucky Division of Waste Management Facility Permit 025-00004. Both old and new sections of the landfill were officially closed in 1998 and the landfill is now in post-closure care.

During closure of the WMU Landfill, a landfill wastewater collection system, surface water drainage ditches and sediment ponds were constructed were installed at the landfill. The landfill wastewater collection system was designed to collect wastewater from both landfill areas and pump it to a holding tank, where it is stored until it is transported offsite to the WMU Wastewater Treatment Plant for disposal. Landfill wastewater collection disposal records for the previous five years indicate an average landfill wastewater disposal volume of about 164,000 gallons per month. The available records indicate that essentially all of the landfill wastewater production is from the OCC Landfill.

In lieu of transporting the landfill wastewater to local wastewater treatment plant, on-site constructed wetlands for landfill wastewater treatment has been designed with the treated landfill wastewater being discharged to receiving waters named "Unnamed tributary to Stoner Creek".

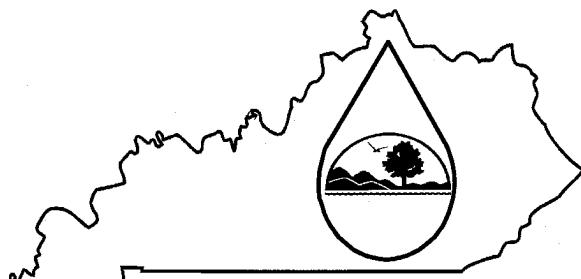
Constructed Wetlands

A surface flow (SF) constructed wetland will be built at the southern side of the property to treat the discharge from the landfill wastewater collection system. The existing landfill wastewater collection system is reported to pump between approximately 70,000 and 275,000 gallons per month. The site improvements to the OCC Landfill, which are being done concurrently during the construction of on-site wetlands, should reduce infiltration into the landfill, and thus decrease landfill wastewater generation. A design flow of 10,233 gallons per day was used for the wetlands construction and design/sizing.

A review of landfill wastewater analytical and biogeochemical data was performed to determine conceptual design parameters. The constructed wetland size is less than one acre and has a depth of two feet. The wetland size, location, operation, and construction were designed based on results from a treatability assessment/feasibility. A holding pond of approximately one acre in size is to be constructed adjacent to the wetlands to serve as a storage facility. This pond is designed to handle the storage requirements for eight months of landfill wastewater. The landfill wastewater will flow through and out of the constructed wetlands by gravity into an effluent collection manhole from where it will be pumped to an existing landfill surface ditch that empties into sediment pond #002, which discharges to an unnamed tributary to Stoner Creek.

The constructed wetlands will be operated during the growing season (April through October) and discharge will only occur during this period. During the winter months (November through March), the landfill wastewater will be stored in a holding basin next to the constructed wetlands and no discharge will occur. The stored landfill wastewater will be pumped through the constructed wetlands the following summer.

KPDES FORM C



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

A complete application consists of this form and Form 1.
For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility: WMU/Clark County Landfill	County: Clark						
AGENCY USE 0091795							
I. OUTFALL LOCATION							
For each outfall list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.							
Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
002*	37	58	41	84	05	28	Unnamed Tributary to Stoner Creek

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

- Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfall. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures. See Attachment 1.
- For each outfall, provide a description of: (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
002	Stormwater Runoff	0.004 MGD	Sedimentation	1-U
	Treated Landfill Wastewater	0.01 MGD	Const. Wetland Cells/Stab. Pond	3-G/3-S

* Existing Outfall

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (Continued)

C. Except for storm water runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

Yes (Complete the following table.) No (Go to Section III.)

OUTFALL NUMBER (list)	OPERATIONS CONTRIBUTING FLOW (list)	FREQUENCY		FLOW				Duration (in days)	
		Days Per Week (specify average)	Months Per Year (specify average)	Flow Rate (in mgd)		Total volume (specify with units)			
		Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily		
002	Treated Landfill Wastewater	7	7	0.01	0.01	0.01	0.01	213*	

* Discharge is continuous Apr. through Oct.

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

Yes (Complete Item III-B) List effluent guideline category:
 No (Go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measures of operation)?

Yes (Complete Item III-C) No (Go to Section IV)

C. If you answered "Yes" to Item III-B, list the quantity which represents the actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

MAXIMUM QUANTITY			Affected Outfalls (list outfall numbers)
Quantity Per Day	Units of Measure	Operation, Product, Material, Etc. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any federal, state or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders and grant or loan conditions.

Yes (Complete the following table) No (Go to Item IV-B)

IDENTIFICATION OF CONDITION AGREEMENT, ETC.	AFFECTED OUTFALLS		BRIEF DESCRIPTION OF PROJECT	FINAL COMPLIANCE DATE	
	No.	Source of Discharge		Required	Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered 5-18.

D. Use the space below to list any of the pollutants (refer to SARA Title III, Section 313) listed in Table C-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

POLLUTANT	SOURCE	POLLUTANT	SOURCE
Ammonia	Lab. Analyses*		
Benzene			
Chlorobenzene			
Dichlorobenzene			
Phosphorus			
Sodium			

* Attachment 2 - Landfill Wastewater Analysis

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you use or produce, or expect to use or produce over the next 5 years as an immediate or final product or byproduct?

Yes (List all such pollutants below)

No (Go to Item VI-B)

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharge of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

Yes (Complete Item VI-C)

No (Go to Item VII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail to the best of your ability at this time the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years. Continue on additional sheets if you need more space.

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge of or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

Yes (Identify the test(s) and describe their purposes below) No (Go to Section VIII)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

Yes (list the name, address, and telephone number of, and pollutants analyzed by each such laboratory or firm below) No (Go to Section IX)

NAME	ADDRESS	TELEPHONE (Area code & number)	POLLUTANTS ANALYZED (list)
Div. of Env. Services	100 Sower Blvd. Frankfort, KY	(502) 564-6120	Inorganics & organics
McCoy & McCoy Laboratories	Lexington, KY	(859) 299-7775	Inorganics, PCBs, pesticides, herbicides, and SVOCs

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): The Honorable Henry Branham, Judge/Executive	TELEPHONE NUMBER (area code and number):
SIGNATURE 	DATE 8-5-08

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. (See instructions)

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)						OUTFALL NO.
Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.						
POLLUTANT	EFFLUENT		INTAKE		3. UNITS (Specify if blank)	4. INTAKE (optional)
	a. Maximum Daily Value (1)	b. Maximum 30-Day Value (if available) (2)	c. Long-Term Avg. Value (if available) (1)	d. No. of Analyses (2)		
a. Biochemical Oxygen Demand (BOD)						
b. Chemical Oxygen Demand (COD)						
c. Total Organic Carbon (TOC)						
d. Total Suspended Solids (TSS)						
e. Ammonia (as N)						
f. Flow (in units of MGD)	VALUE	VALUE	VALUE	MGD	VALUE	
g. Temperature (winter)	VALUE	VALUE	VALUE	°C	VALUE	
h. Temperature (summer)	VALUE	VALUE	VALUE	°C	VALUE	
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM		STANDARD UNITS

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO.	2. MARK "X"	3. EFFLUENT			4. UNITS	5. INTAKE (optional)			6. b. No. of Analyses
		a. Maximum Daily Value	b. Maximum 30-Day Value (if available)	c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Long-Term Avg. Value	b. No. of Analyses	
(if available)		Believed Present	Believed Absent	Concentration (1) Mass	Concentration (2) Mass	Concentration (1) Mass	Concentration (2) Mass		
a. Bromide (24959-67-9)									
b. Bromine									
Total Residual									
c. Chloride									
d. Chlorine, Total Residual									
e. Color									
f. Fecal Coliform									
g. Fluoride (16984-48-8)									
h. Hardness (as CaCO ₃)									
i. Nitrate - Nitrite (as N)									
j. Nitrogen, Total Organic (as N)									
k. Oil and Grease									
l. Phosphorous (as P), Total (7723-14-0)									
m. Radioactivity									
(1) Alpha, Total									
(2) Beta, Total									
(3) Radium Total									
(4) Radium, 226, Total									

Part B - Continued		2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)			
POLLUTANT And CAS NO. (if available)	a. Believed Present	b. Believed Absent	c. Maximum Daily Value (1) Concentration Mass	d. b. Maximum 30-Day Value (if available) (1) Concentration Mass	e. c. Long-Term Avg. Value (if available) (1) Concentration Mass	f. d. No. of Analyses	g. a. Concentration	h. b. Long-Term Avg. Value (1) Concentration Mass	i. a. Long-Term Avg. Value (2) Concentration Mass	j. b. No. of Analyses			
n. Sulfate (as SO ₄) (14808-79-8)													
o. Sulfide (as S)													
p. Sulfite (as SO ₃) (14286-46-3)													
q. Surfactants													
r. Aluminum, Total (7429-90)													
s. Barium, Total (7440-39-3)													
t. Boron, Total (7440-42-8)													
u. Cobalt, Total (7440-48-4)													
v. Iron, Total (7439-89-6)													
w. Magnesium Total (7439-96-4)													
x. Molybdenum Total (7439-98-7)													
y. Manganese, Total (7439-96-6)													
z. Tin, Total (7440-31-5)													
aa. Titanium, Total (7440-32-6)													

Part C – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-reclaimed GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X" in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CASNO. (if available)	2. MARK "X"	3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
		a. Testing Required	b. Believed Present	a. Maximum Daily Value (1)	b. Maximum 30-Day Value (if available) (2)	c. Long-Term Avg. Value (if available) (1)	d. No. of Analyses
METALS, CYANIDE AND TOTAL PHENOLS							
1M. Antimony Total (7440-36-0)							
2M. Arsenic, Total (7440-38-2)							
3M. Beryllium Total (7440-41-7)							
4M. Cadmium Total (7440-43-9)							
5M. Chromium Total (7440-43-9)							
6M. Copper Total (7550-50-8)							
7M. Lead Total (7439-92-1)							
8M. Mercury Total (7439-97-6)							
9M. Nickel Total (7440-02-0)							
10M. Selenium, Total (7782-49-2)							
11M. Silver, Total (7440-28-0)							

Part C - Continued

Part C - Continued

POLLUTANT And CAS NO. (if available)	Testing Required	2. MARK "X"		3. EFFLUENT			4. UNITS		5. INTAKE (optional)		
		a. Believed Present	b. Believed Absent	a. Maximum Daily Value (1)	b. Maximum 30-Day Value (if available) (2)	c. Long-Term Avg. (1)	d. Value (if available) (2)	a. Concentration Mass	b. Concentration Mass	a. Long-Term Avg Value (1)	b. No. of Analyses
9V Chloroethane (74-00-3)											
10V. 2-Chloro- ethylvinyl Ether (110-75-8)											
11V. Chloroform (67-66-3)											
12V. Dichloro- bromomethane (75-71-8)											
14V. 1,1'- Dichloroethane (75-34-3)											
15V. 1,2'- Dichloroethane (107-06-2)											
16V. 1,1'- Dichlorethylene (75-35-4)											
17V. 1,2-Di- chloropropane (78-87-5)											
18V. 1,3- Dichloropro- pylene (452-75-6)											
19V. Ethyl- benzene (100-41-4)											
20V. Methyl Bromide (74-83-9)											

Part C - Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFLUENT			4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value (1)	b. Maximum 30-Day Value (if available) (2)	c. Long-Term Avg. Value (if available) (1)	d. No. of Analyses (2)	a. Concentration Mass	b. Long-Term Avg. Value (1)
								b. Concentration Mass	b. No. of Analyses (2)
21V. Methyl Chloride (74-87-3)									
22V. Methylene Chloride (75-00-2)									
23V. 1,1,2,2- Tetrachloro- ethane (79-34-5)									
24V. Tetrachloro- ethylene (127-18-4)									
25V. Toluene (108-88-3)									
26V. 1,2-Trans- Dichloro- ethylene (156-60-5)									
27V. 1,1,1-Tri- chloroethane (71-55-6)									
28V. 1,1,2-Tri- chloroethane (79-00-5)									
29V. Trichloro- ethylene (79-01-6)									
30V. Vinyl Chloride (75-01-4)									
SEE ATTACHMENT 3									

Part C - Continued

POLLUTANT And CAS NO. (if available)	MARK "X"		EFFLUENT			UNITS		INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed	a. Maximum Daily Value (1)	b. Maximum 30-Day Value (if available) (2)	c. Long-Term Avg. Value (if available) (1)	d. No. of Analyses	a. Concentration Mass	b. Long-Term Avg. Value Analyses	a. Concentration Mass
			b. Believed Absent	a. Concentration Mass	b. Concentration Mass	c. Long-Term Avg. Value (if available) (2)	d. No. of Analyses	a. Concentration Mass	b. Long-Term Avg. Value Analyses	a. Concentration Mass
GC/MS FRACTION - ACID COMPOUNDS										
1A. 2-Chloro-phenol (95-57-8)										
2A. 2,4-Dichloro-phenol (120-83-2)										
3A. 2,4-Dimethylphenol (105-67-9)										
4A. 4,6-Dinitro-o-cresol (534-52-1)										
5A. 2,4-Dinitro-phenol (51-28-5)										
6A. 2-Nitro-phenol (88-75-5)										
7A. 4-Nitro-phenol (100-02-7)										
8A. P-chloro-m-cresol (59-50-7)										
9A. Pentachlorophenol (87-88-5)										
10A. Phenol (108-05-2)										
11A. 2,4,6-Trichlorophenol (88-06-2)										
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS										
IB. Acenaphthene (83-32-9)										

Part C - Continued

POLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFECTUENT		4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value	b. Maximum 30-Day Value (if available)	c. Long-Term Avg. Value (if available)	d. No. of Analyses	a. Long-Term Avg Value
				(1) Concentration Mass	(2) Concentration Mass	(1) Concentration Mass	(2) Concentration Mass	
GCM'S FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)								
2B. Acenaphthylene (208-96-8)								
3B. Anthracene (120-12-7)								
4B. Benzidine (92-87-5)								
SB. Benzo(a)-anthracene (56-55-3)								
6B. Benzo(a)-pyrene (50-32-8)								
7B. 3,4-Benzo-fluoranthene (205-99-2)								
8B. Benzog(ghi)perylene (191-24-2)								
9B. Benzo(k)-fluoranthene (207-08-9)								
10B. Bis(2-chloroethyl-oethoxy)methane (111-91-1)								
11B. Bis(2-chloroisopropyl)-ether								
12B. Bis(2-ethylhexyl)-phthalate (117-81-7)								

SEE ATTACHMENT 3

Part C - Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value	b. Maximum 30-Day Value (if available)	c. Long-Term Avg Value (if available)	d. No. of Analyses	a. Concentration (1) Mass
				(1) Concentration Mass	(2) Concentration Mass	(1) Concentration Mass	(2) Concentration Mass	b. Concentration (1) Mass
G/C/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)								
13B. 4-Bromo-phenyl ether (101-55-3)								
14B. Butyl-benzyl phthalate (85-68-7)								
15B. 2-Chloronaphthalene (7005-72-3)								
16B. 4-Chlorophenyl ether (7005-72-3)								
				SEE ATTACHMENT 3				
17B. Chrysene (218-01-9)								
18B. Dibenzo-(a,h)-anthracene (53-70-3)								
19B. 1,2-Dichlorobenzene (95-50-1)								
20B. 1,3-Dichloro-Benzene (541-73-1)								
21B. 1,4-Dichlorobenzene (106-46-7)								
22B. 3,3'-Dichlorobenzidine (91-94-1)								
23B. Diethyl Phthalate (84466-2)								

Part C - Continued

POLLUTANT And CAS NO. (if available)	Testing Required	MARK "X"		EFFLUENT			UNITS		INTAKE (optional)		
		a. Believed Present	b. Believed Absent	a. Maximum Daily Value	b. Maximum 30-Day Value (if available)	c. Long-Term Avg. Value (if available)	d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value	b. No. of Analyses
								(1) Mass	(2) Mass	(1) Concentration	(2) Concentration
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)											
24B Dimethyl Phthalate (131-11-3)											
25B Di-N-butyl Phthalate (84-74-2)											
26B 2,4-Dinitrotoluene (121-14-2)											
27B 2,6-Dinitrotoluene (606-20-2)											
28B Di-n-octyl Phthalate (117-84-0)											
29B 1,2-diphenylhydrazine (as azobenzene) (122-66-7)											
30B Fluoranthene (208-44-0)											
31B. Fluorene (86-73-7)											
32B. Hexachlorobenzene (118-71-1)											
33B. Hexachlorobutadiene (87-68-3)											
34B Hexachlorocyclopentadiene (77-47-4)											

SEE ATTACHMENT 3

Part C - Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	a. Testing Required	b. Believed Present	a. Believed Absent	b. Maximum 30-Day Value (if available)	c. Long-Term Avg Value (if available)	d. No. of Analyses	a. Concentration Mass	b. Long-Term Avg Value (if available) Analyses
			Maximum Daily Value (1) (2)	Concentration Mass	(1) (2)	Concentration Mass	(1) (2)	Concentration Mass
GCM/MS FRACTION - BASE/NEUTRAL COMPOUNDS (Continued)								
35B. Hexachloroethane (67-72-1)								
36B. Indeno-(1,2,3-oc)-Pyrene (193-39-5)								
37B. Isophorone (78-59-1)								
38B. Naphthalene (91-20-3)								
39B. Nitrobenzene (98-95-3)								
40B. N-Nitrosodimethylamine (62-75-9)								
41B. N-nitrosodi-n-propylamine (621-64-7)								
42B. N-nitrosodiphenylamine (86-30-6)								
43B. Phenanthrene (85-01-8)								
44B. Pyrene (129-00-0)								
45B. 1,2,4-Trichlorobenzene (120-82-1)								

SEE ATTACHMENT 3

Part C - Continued

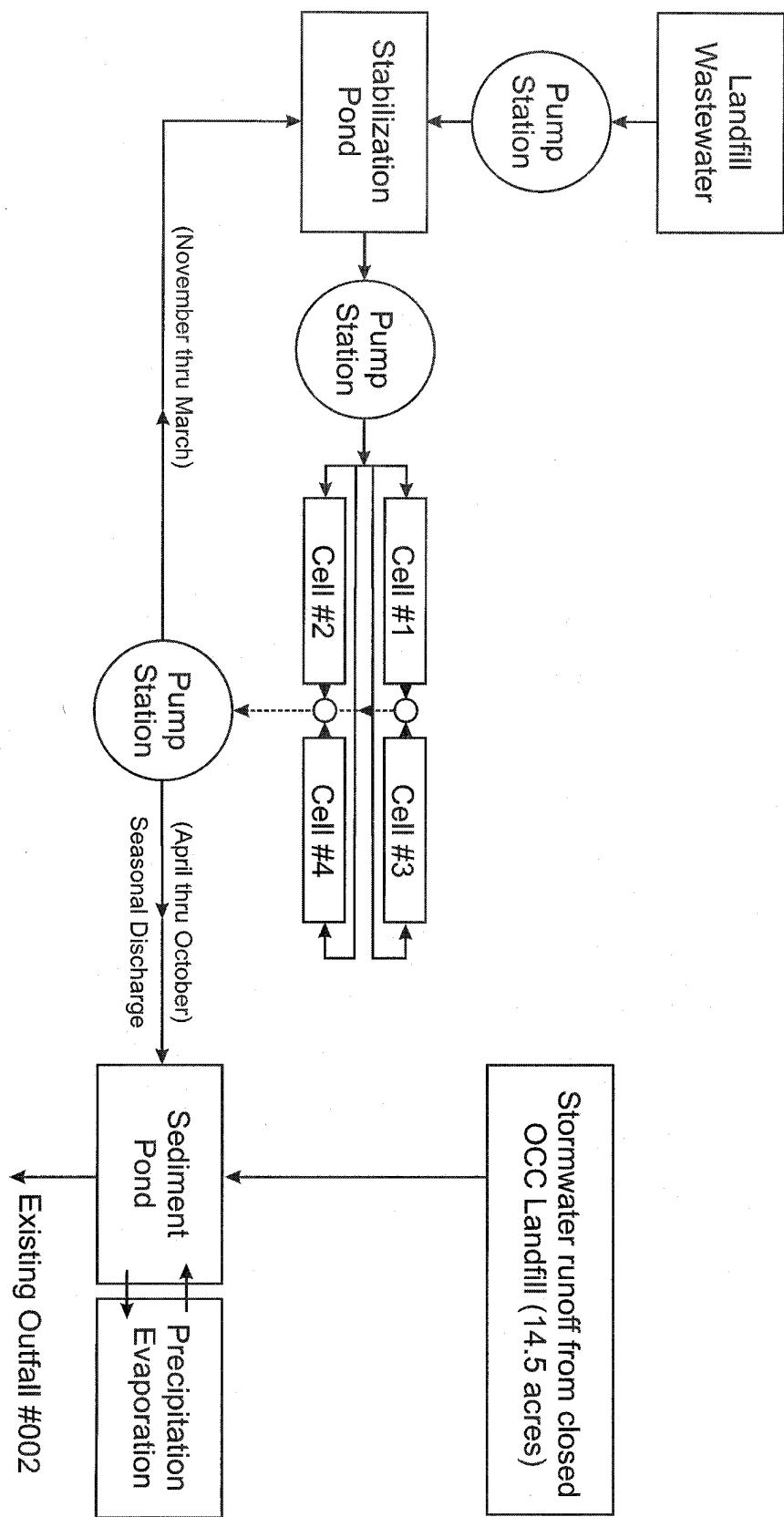
1. POLLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFLUENT			4. UNITS		5. INTAKE (optional)	
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value	b. Maximum 30-Day Value (if available)	c. Long-Term Avg. Value (if available)	d. No. of Analyses	a. Concentration	b. Concentration
				(1) Concentration Mass	(2) Concentration Mass	(1) Concentration Mass		(2) Concentration Mass	(2) Concentration Mass
GC/MS FRACTION - PESTICIDES									
1P. Aldrin (309-00-2)									
2P. α -BHC (319-84-6)									
3P. β -BHC (58-89-9)									
4P. gamma-BHC (58-89-9)									
5P. δ -BHC (319-86-8)									
6P. Chlordane (57-74-9)									
7P. 4,4'-DDT (50-29-3)									
8P. 4,4'-DDE (72-55-9)									
9P. 4,4'-DDD (72-54-8)									
10P. Dieldrin (60-57-1)									
11P. α -Endosulfan (115-29-7)									
12P. β -Endosulfan (115-29-7)									
13P. Endosulfan Sulfate (1031-07-8)									
14P. Endrin (72-20-8)									

SEE ATTACHMENT 3

Part C - Continued		2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
POLLUTANT And CAS NO. (if available)	1. a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value (1) Concentration Mass	b. Maximum 30-Day Value (if available) (2) Concentration Mass	c. Long-Term Avg. Value (if available) (1) Concentration Mass	d. No. of Analyses (2)	a. Long-Term Avg Value (1) Concentration Mass	b. No. of Analyses (2) Concentration Mass
GCM/S FRACTION - PESTICIDES									
15P. Endrin Aldehyde (7421-93-4)									
16P. Heptachlor (76-44-8)									
17P. Heptachlor Epoxide (1024-57-3)									
18P. PCB-1242 (53469-21-9)									
19P. PCB-1254 (11097-69-1)									
20P. PCB-1221 (11104-28-2)									
21P. PCB-1232 (11141-16-5)									
22P. PCB-1248 (12572-29-6)									
23P. PCB-1260 (11096-82-5)									
24P. PCB-1016 (12674-11-2)									
25P. Toxaphene (8001-35-2)									

SEE ATTACHMENT 3

Attachment 1
Landfill Wastewater



Attachment 2

Laboratory Reports

- Landfill Wastewater Analysis**



ERINIE FLETCHER
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL SERVICES
CENTRALIZED LABORATORY FACILITY
100 SOWER BLVD STE 104
FRANKFORT, KY 40601-8272
www.kentucky.gov
Friday, March 11, 2005.

LAJUANA S. WILCHER
SECRETARY

Sample Number: AC00800

To: Division of Waste Management
 14 Reilly Road
 Frankfort, KY 40601
 ATTN: Missy Jones

Re: Winchester Municipal Landfill

County: Clark
 Collected By: Ben Marshall
 Delivered By: Brian Lenihan
 Received By: Jennifer Clark
 Sample Matrix: Water

Program Code: B90

AKGWA:

Facility:	Date: 2/10/2005	Time: 17:40
	Date: 02/11/05	Time: 12:50
	Date: 02/11/05	Time: 12:50
Collection Method:	Grab	

Sample Identification: Leachate
 Field ID:

REPORT OF ANALYSIS

CAS NUM TESTCODE	CONSTITUENTS	RESULT	UNIT	RL	MDL	FLAG
1000	Acidity	44.4	mg/L	2		
1020	Alkalinity (as CaCO ₃)	556	mg/L	5		
2040	CBOD-5	4.74	mg/L	2		
16887-00-6 1100	Chloride	109	mg/L	5.0		
1220	Hardness, Total (as CaCO ₃)	579	mg/L	1		
1320	Solids, Total Suspended	184	mg/L	1.50		
14808-79-8 1420	Sulfate	33.9	mg/L	5		
7440-44-0 2260	Organic Carbon, Total	9.45	mg/L	0.25		
7664-41-7 2020	Ammonia (as N)	13.0	mg/L	0.20		
2280	Total Kjeldhal Nitrogen	10.3	mg/L	0.20		
2120	Nitrate/Nitrite (as N)	1.41	mg/L	0.020		
14797-65-0 2140	Nitrite (as N)	Below RL	mg/L	0.025		
7723-14-0 2200	Phosphorus, Total	1.98	mg/L	0.010		
7440-70-2 \$3120 MINCA Calcium		161	mg/L	0.150	P	
7439-89-6 \$3120 MINCA Iron		219	mg/L	0.050	P	
7439-95-4 \$3120 MINCA Magnesium		43.0	mg/L	0.500	P	
7440-09-7 \$3120 MINCA Potassium		13.6	mg/L	0.150	P	
7440-23-5 \$3120 MINCA Sodium		52.7	mg/L	0.100	P	
7429-90-5 \$3130 ALLCA Aluminum		246	µg/L	3.0	P	
7440-36-0 \$3130 ALLCA Antimony		Below RL	µg/L	1.0	P	
7440-38-2 \$3130 ALLCA Arsenic		19.1	µg/L	0.5	P	
7440-39-3 \$3130 ALLCA Barium		480	µg/L	0.2	P	
7440-41-7 \$3130 ALLCA Beryllium		Below RL	µg/L	1.0	P	
7440-43-9 \$3130 ALLCA Cadmium		0.716	µg/L	0.4	P	
7440-47-3 \$3130 ALLCA Chromium		1.79	µg/L	0.2	P	
7440-48-4 \$3130 ALLCA Cobalt		8.86	µg/L	1.0	P	
7440-50-8 \$3130 ALLCA Copper		3.51	µg/L	0.5	P	
7439-92-1 \$3130 ALLCA Lead		8.22	µg/L	1.0	P	

Sample Number: AC00800

Report Version 1

Page 1 of 6



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<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
7439-96-5	\$3130	ALLCA Manganese	5750	$\mu\text{g/L}$	0.5		P
7439-98-7	\$3130	ALLCA Molybdenum	Below RL	$\mu\text{g/L}$	1.0		P
7440-02-0	\$3130	ALLCA Nickel	19.0	$\mu\text{g/L}$	1.0		P
7782-49-2	\$3130	ALLCA Selenium	3.13	$\mu\text{g/L}$	0.8		P
7440-22-4	\$3130	ALLCA Silver	0.636	$\mu\text{g/L}$	0.4		P
7440-28-0	\$3130	ALLCA Thallium	Below RL	$\mu\text{g/L}$	1.0		P
7440-62-2	\$3130	ALLCA Vanadium	2.92	$\mu\text{g/L}$	1.0		P
7440-66-6	\$3130	ALLCA Zinc	23.6	$\mu\text{g/L}$	2.0		P
75-71-8	\$6320	ALL Dichlorodifluoromethane	Below RL	$\mu\text{g/L}$	0.500		U
74-87-3	\$6320	ALL Chloromethane	Below RL	$\mu\text{g/L}$	0.500		U
75-01-4	\$6320	ALL Vinyl chloride	Below RL	$\mu\text{g/L}$	0.500		U
74-83-9	\$6320	ALL Bromomethane	Below RL	$\mu\text{g/L}$	0.500		U
75-00-3	\$6320	ALL Chloroethane	Below RL	$\mu\text{g/L}$	0.500		U
75-69-4	\$6320	ALL Trichlorofluoromethane	Below RL	$\mu\text{g/L}$	0.500		U
60-29-7	\$6320	ALL Diethyl ether	13.4	$\mu\text{g/L}$	1.00		
75-35-4	\$6320	ALL 1,1-Dichloroethene	Below RL	$\mu\text{g/L}$	0.500		U
67-64-1	\$6320	ALL Acetone	3.02	$\mu\text{g/L}$	1.00		K
74-88-4	\$6320	ALL Methyl iodide	Below RL	$\mu\text{g/L}$	1.00		U
75-15-0	\$6320	ALL Carbon disulfide	Below RL	$\mu\text{g/L}$	1.00		U
107-05-1	\$6320	ALL Allyl chloride	Below RL	$\mu\text{g/L}$	1.00		U
75-09-2	\$6320	ALL Dichloromethane (Methylene chloride)	Below RL	$\mu\text{g/L}$	0.500		U
107-13-1	\$6320	ALL Acrylonitrile	Below RL	$\mu\text{g/L}$	1.00		U
156-60-5	\$6320	ALL trans-1,2-Dichloroethene	Below RL	$\mu\text{g/L}$	0.500		U
1634-04-4	\$6320	ALL Methyl-tert-butyl ether (MTBE)	Below RL	$\mu\text{g/L}$	1.00		U
75-34-3	\$6320	ALL 1,1-Dichloroethane	Below RL	$\mu\text{g/L}$	0.500		U
108-05-4	\$6320	ALL Vinyl acetate	Below RL	$\mu\text{g/L}$	1.00		U
594-20-7	\$6320	ALL 2,2-Dichloropropane	Below RL	$\mu\text{g/L}$	0.500		U
156-59-2	\$6320	ALL cis-1,2-Dichloroethene	0.462	$\mu\text{g/L}$	0.500		J
78-93-3	\$6320	ALL 2-Butanone (MEK)	Below RL	$\mu\text{g/L}$	1.00		U
107-12-0	\$6320	ALL Propionitrile	Below RL	$\mu\text{g/L}$	2.00		U
96-33-3	\$6320	ALL Methyl acrylate	Below RL	$\mu\text{g/L}$	1.00		U
126-98-7	\$6320	ALL Methacrylonitrile	Below RL	$\mu\text{g/L}$	1.00		U
74-97-5	\$6320	ALL Bromochloromethane	Below RL	$\mu\text{g/L}$	0.500		U
109-99-9	\$6320	ALL Tetrahydrofuran	4.89	$\mu\text{g/L}$	1.00		
67-66-3	\$6320	ALL Chloroform	Below RL	$\mu\text{g/L}$	0.500		U
71-55-6	\$6320	ALL 1,1,1-Trichloroethane	Below RL	$\mu\text{g/L}$	0.500		U
109-69-3	\$6320	ALL 1-Chlorobutane	Below RL	$\mu\text{g/L}$	1.00		U
56-23-5	\$6320	ALL Carbon tetrachloride	Below RL	$\mu\text{g/L}$	0.500		U
563-58-6	\$6320	ALL 1,1-Dichloropropene	Below RL	$\mu\text{g/L}$	0.500		U
71-43-2	\$6320	ALL Benzene	0.447	$\mu\text{g/L}$	0.500		J
107-06-2	\$6320	ALL 1,2-Dichloroethane	Below RL	$\mu\text{g/L}$	0.500		U
79-01-6	\$6320	ALL Trichloroethene	Below RL	$\mu\text{g/L}$	0.500		U
78-87-5	\$6320	ALL 1,2-Dichloropropane	Below RL	$\mu\text{g/L}$	0.500		U
74-95-3	\$6320	ALL Dibromomethane	Below RL	$\mu\text{g/L}$	0.500		U
80-62-6	\$6320	ALL Methyl methacrylate	Below RL	$\mu\text{g/L}$	1.00		U
75-27-4	\$6320	ALL Bromodichloromethane	Below RL	$\mu\text{g/L}$	0.500		U
79-46-9	\$6320	ALL 2-Nitropropane	Below RL	$\mu\text{g/L}$	1.00		U
107-14-2	\$6320	ALL Chloroacetonitrile	Below RL	$\mu\text{g/L}$	10.0		U
10061-01-5	\$6320	ALL cis-1,3-Dichloropropene	Below RL	$\mu\text{g/L}$	0.500		U
108-10-1	\$6320	ALL 4-Methyl-2-pentanone (MIBK)	Below RL	$\mu\text{g/L}$	1.00		U
108-88-3	\$6320	ALL Toluene	Below RL	$\mu\text{g/L}$	0.500		U
10061-02-6	\$6320	ALL trans-1,3-Dichloropropene	Below RL	$\mu\text{g/L}$	0.500		U

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
97-63-2	\$6320	ALL	Ethyl methacrylate	Below RL	µg/L	1.00	U
79-00-5	\$6320	ALL	1,1,2-Trichloroethane	Below RL	µg/L	0.500	U
127-18-4	\$6320	ALL	Tetrachloroethene	Below RL	µg/L	0.500	U
591-78-6	\$6320	ALL	2-Hexanone (Methyl butyl ketone)	Below RL	µg/L	1.00	U
124-48-1	\$6320	ALL	Dibromochloromethane	Below RL	µg/L	0.500	U
106-93-4	\$6320	ALL	1,2-Dibromoethane (EDB)	Below RL	µg/L	0.500	U
142-28-9	\$6320	ALL	1,3-Dichloropropane	Below RL	µg/L	0.500	U
108-90-7	\$6320	ALL	Chlorobenzene	Below RL	µg/L	0.500	U
630-20-6	\$6320	ALL	1,1,1,2-Tetrachloroethane	Below RL	µg/L	0.500	U
544-10-5	\$6320	ALL	1-Chlorohexane	Below RL	µg/L	0.500	U
100-41-4	\$6320	ALL	Ethylbenzene	Below RL	µg/L	0.500	U
	\$6320	ALL	1,3-Xylene & 1,4-Xylene	Below RL	µg/L	0.500	U
95-47-6	\$6320	ALL	1,2-Xylene	Below RL	µg/L	0.500	U
100-42-5	\$6320	ALL	Styrene	Below RL	µg/L	0.500	U
75-25-2	\$6320	ALL	Bromoform	Below RL	µg/L	0.500	U
98-82-8	\$6320	ALL	Isopropylbenzene (Cumene)	Below RL	µg/L	0.500	U
108-86-1	\$6320	ALL	Bromobenzene	Below RL	µg/L	0.500	U
96-18-4	\$6320	ALL	1,2,3-Trichloropropane	Below RL	µg/L	0.500	U
79-34-5	\$6320	ALL	1,1,2,2-Tetrachloroethane	Below RL	µg/L	0.500	U
110-57-6	\$6320	ALL	trans-1,4-Dichloro-2-butene	Below RL	µg/L	1.00	U
103-65-1	\$6320	ALL	n-Propylbenzene	Below RL	µg/L	0.500	U
95-49-8	\$6320	ALL	2-Chlorotoluene	Below RL	µg/L	0.500	U
108-41-8	\$6320	ALL	3-Chlorotoluene	Below RL	µg/L	0.500	U
106-43-4	\$6320	ALL	4-Chlorotoluene	Below RL	µg/L	0.500	U
108-67-8	\$6320	ALL	1,3,5-Trimethylbenzene	Below RL	µg/L	0.500	U
76-01-7	\$6320	ALL	Pentachloroethane	Below RL	µg/L	1.00	U
98-06-6	\$6320	ALL	tert-Butylbenzene	Below RL	µg/L	0.500	U
95-63-6	\$6320	ALL	1,2,4-Trimethylbenzene	Below RL	µg/L	0.500	U
135-98-8	\$6320	ALL	sec-Butylbenzene	Below RL	µg/L	0.500	U
541-73-1	\$6320	ALL	1,3-Dichlorobenzene	Below RL	µg/L	0.500	U
99-87-6	\$6320	ALL	p-Isopropyltoluene (Cymene)	Below RL	µg/L	0.500	U
106-46-7	\$6320	ALL	1,4-Dichlorobenzene	Below RL	µg/L	0.630	U
95-50-1	\$6320	ALL	1,2-Dichlorobenzene	Below RL	µg/L	0.500	U
104-51-8	\$6320	ALL	n-Butylbenzene	Below RL	µg/L	0.500	U
67-72-1	\$6320	ALL	Hexachloroethane	Below RL	µg/L	1.00	U
96-12-8	\$6320	ALL	1,2-Dibromo-3-chloropropane	Below RL	µg/L	0.500	U
98-95-3	\$6320	ALL	Nitrobenzene	Below RL	µg/L	10.0	U
120-82-1	\$6320	ALL	1,2,4-Trichlorobenzene	Below RL	µg/L	0.500	U
87-68-3	\$6320	ALL	Hexachlorobutadiene	Below RL	µg/L	0.500	U
91-20-3	\$6320	ALL	Naphthalene	Below RL	µg/L	0.500	U
87-61-6	\$6320	ALL	1,2,3-Trichlorobenzene	Below RL	µg/L	0.500	U
	\$6320	ALL	Total Trihalomethanes	Below RL	µg/L	0.5	U
1330-20-7	\$6320	ALL	Total Xylenes	Below RL	µg/L	0.5	U
62-75-9	\$6340	ALL	N-Nitrosodimethylamine	Below RL	µg/L	5.15	U
110-86-1	\$6340	ALL	Pyridine	Below RL	µg/L	5.15	U
109-06-8	\$6340	ALL	2-Picoline	Below RL	µg/L	5.15	U
10595-95-6	\$6340	ALL	N-Nitrosomethylalkylamine	Below RL	µg/L	5.15	U
66-27-3	\$6340	ALL	Methyl methanesulfonate	Below RL	µg/L	5.15	U
55-18-5	\$6340	ALL	N-Nitrosodiethylamine	Below RL	µg/L	5.15	U
62-50-0	\$6340	ALL	Ethyl methanesulfonate	Below RL	µg/L	5.15	U
108-95-2	\$6340	ALL	Phenol	Below RL	µg/L	5.15	U
62-53-3	\$6340	ALL	Aniline	Below RL	µg/L	5.15	U

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
76-01-7	\$6340 ALL	Pentachloroethane	Below RL	µg/L	5.15		U
111-44-4	\$6340 ALL	bis(2-Chloroethyl) ether	Below RL	µg/L	5.15		U
95-57-8	\$6340 ALL	2-Chlorophenol	Below RL	µg/L	5.15		U
541-73-1	\$6340 ALL	1,3-Dichlorobenzene	Below RL	µg/L	5.15		U
106-46-7	\$6340 ALL	1,4-Dichlorobenzene	Below RL	µg/L	5.15		U
100-51-6	\$6340 ALL	Benzyl alcohol	Below RL	µg/L	5.15		U
95-50-1	\$6340 ALL	1,2-Dichlorobenzene	Below RL	µg/L	5.15		U
95-48-7	\$6340 ALL	2-Methylphenol	Below RL	µg/L	5.15		U
108-60-1	\$6340 ALL	bis(2-Chloro-1-methylethyl) ether	Below RL	µg/L	5.15		U
930-55-2	\$6340 ALL	N-Nitrosopyrrolidine	Below RL	µg/L	5.15		U
	\$6340 ALL	3-Methylphenol & 4-Methylphenol	Below RL	µg/L	5.15		U
98-86-2	\$6340 ALL	Acetophenone	Below RL	µg/L	5.15		U
621-64-7	\$6340 ALL	N-Nitrosodi-n-propylamine	Below RL	µg/L	5.15		U
59-89-2	\$6340 ALL	N-Nitrosomorpholine	Below RL	µg/L	5.15		U
95-53-4	\$6340 ALL	o-Tolidine	Below RL	µg/L	5.15		U
67-72-1	\$6340 ALL	Hexachloroethane	Below RL	µg/L	5.15		U
98-95-3	\$6340 ALL	Nitrobenzene	Below RL	µg/L	5.15		U
100-75-4	\$6340 ALL	N-Nitrosopiperidine	Below RL	µg/L	5.15		U
78-59-1	\$6340 ALL	Isophorone	Below RL	µg/L	5.15		U
88-75-5	\$6340 ALL	2-Nitrophenol	Below RL	µg/L	5.15		U
105-67-9	\$6340 ALL	2,4-Dimethylphenol	Below RL	µg/L	5.15		U
126-68-1	\$6340 ALL	O,O,O-Triethyl phosphorothioate	Below RL	µg/L	5.15		U
65-85-0	\$6340 ALL	Benzoic acid	Below RL	µg/L	5.15		U
111-91-1	\$6340 ALL	bis(2-Chloroethoxy)methane	Below RL	µg/L	5.15		U
120-83-2	\$6340 ALL	2,4-Dichlorophenol	Below RL	µg/L	5.15		U
120-82-1	\$6340 ALL	1,2,4-Trichlorobenzene	Below RL	µg/L	5.15		U
91-20-3	\$6340 ALL	Naphthalene	Below RL	µg/L	1.03		U
106-47-8	\$6340 ALL	4-Chloroaniline	Below RL	µg/L	5.15		U
87-65-0	\$6340 ALL	2,6-Dichlorophenol	Below RL	µg/L	5.15		U
1888-71-7	\$6340 ALL	Hexachloropropene	Below RL	µg/L	5.15		U
87-68-3	\$6340 ALL	Hexachlorobutadiene	Below RL	µg/L	5.15		U
924-16-3	\$6340 ALL	N-Nitrosodibutylamine	Below RL	µg/L	5.15		U
59-50-7	\$6340 ALL	4-Chloro-3-methylphenol	Below RL	µg/L	5.15		U
120-58-1	\$6340 ALL	Isosafrole	Below RL	µg/L	5.15		U
91-57-6	\$6340 ALL	2-Methylnaphthalene	Below RL	µg/L	1.03		U
77-47-4	\$6340 ALL	Hexachlorocyclopentadiene	Below RL	µg/L	5.15		U
95-94-3	\$6340 ALL	1,2,4,5-Tetrachlorobenzene	Below RL	µg/L	5.15		U
88-06-2	\$6340 ALL	2,4,6-Trichlorophenol	Below RL	µg/L	5.15		U
95-95-4	\$6340 ALL	2,4,5-Trichlorophenol	Below RL	µg/L	5.15		U
94-59-7	\$6340 ALL	Safrole	Below RL	µg/L	5.15		U
91-58-7	\$6340 ALL	2-Chloronaphthalene	Below RL	µg/L	5.15		U
88-74-4	\$6340 ALL	2-Nitroaniline	Below RL	µg/L	5.15		U
130-15-4	\$6340 ALL	1,4-Naphthoquinone	Below RL	µg/L	5.15		U
131-11-3	\$6340 ALL	Dimethyl phthalate	Below RL	µg/L	5.15		U
99-65-0	\$6340 ALL	1,3-Dinitrobenzene	Below RL	µg/L	5.15		U
606-20-2	\$6340 ALL	2,6-Dinitrotoluene	Below RL	µg/L	5.15		U
208-96-8	\$6340 ALL	Acenaphthylene	Below RL	µg/L	1.03		U
99-09-2	\$6340 ALL	3-Nitroaniline	Below RL	µg/L	5.15		U
83-32-9	\$6340 ALL	Acenaphthene	Below RL	µg/L	1.03		U
51-28-5	\$6340 ALL	2,4-Dinitrophenol	Below RL	µg/L	5.15		U
100-02-7	\$6340 ALL	4-Nitrophenol	Below RL	µg/L	5.15		U
608-93-5	\$6340 ALL	Pentachlorobenzene	Below RL	µg/L	5.15		U

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
121-14-2	\$6340 ALL	2,4-Dinitrotoluene	Below RL	µg/L	5.15		U
132-64-9	\$6340 ALL	Dibenzofuran	Below RL	µg/L	5.15		U
91-59-8	\$6340 ALL	2-Naphthylamine	Below RL	µg/L	5.15		U
58-90-2	\$6340 ALL	2,3,4,6-Tetrachlorophenol	Below RL	µg/L	5.15		U
134-32-7	\$6340 ALL	1-Naphthylamine	Below RL	µg/L	5.15		U
84-66-2	\$6340 ALL	Diethyl phthalate	Below RL	µg/L	5.15		U
7005-72-3	\$6340 ALL	4-Chlorophenyl phenyl ether	Below RL	µg/L	5.15		U
86-73-7	\$6340 ALL	Fluorene	Below RL	µg/L	1.03		U
297-97-2	\$6340 ALL	Thionazin	Below RL	µg/L	5.15		U
100-01-6	\$6340 ALL	4-Nitroaniline	Below RL	µg/L	5.15		U
99-55-8	\$6340 ALL	5-Nitro-o-toluidine	Below RL	µg/L	5.15		U
534-52-1	\$6340 ALL	4,6-Dinitro-2-methylphenol	Below RL	µg/L	5.15		U
86-30-6	\$6340 ALL	N-Nitrosodiphenylamine		8.58 µg/L	5.15		
3689-24-5	\$6340 ALL	Sulfotep	Below RL	µg/L	5.15		U
99-35-4	\$6340 ALL	1,3,5-Trinitrobenzene	Below RL	µg/L	5.15		U
2303-16-4	\$6340 ALL	Diallate (trans)	Below RL	µg/L	5.15		U
298-02-2	\$6340 ALL	Phorate	Below RL	µg/L	5.15		U
62-44-2	\$6340 ALL	Phenacetin	Below RL	µg/L	5.15		U
2303-16-4	\$6340 ALL	Diallate (cis)	Below RL	µg/L	5.15		U
101-55-3	\$6340 ALL	4-Bromophenyl phenyl ether	Below RL	µg/L	5.15		U
319-84-6	\$6340 ALL	alpha-BHC	Below RL	µg/L	5.15		U
118-74-1	\$6340 ALL	Hexachlorobenzene	Below RL	µg/L	5.15		U
60-51-5	\$6340 ALL	Dimehoate	Below RL	µg/L	5.15		U
319-85-7	\$6340 ALL	beta-BHC	Below RL	µg/L	5.15		U
92-67-1	\$6340 ALL	4-Aminobiphenyl	Below RL	µg/L	5.15		U
87-86-5	\$6340 ALL	Pentachlorophenol	Below RL	µg/L	5.15		U
82-68-8	\$6340 ALL	Pentachloronitrobenzene	Below RL	µg/L	5.15		U
23950-58-5	\$6340 ALL	Pronamide	Below RL	µg/L	5.15		U
58-89-9	\$6340 ALL	gamma-BHC (Lindane)	Below RL	µg/L	5.15		U
88-85-7	\$6340 ALL	Dino ^{seb}	Below RL	µg/L	5.15		U
298-04-4	\$6340 ALL	Disulfoton	Below RL	µg/L	5.15		U
85-01-8	\$6340 ALL	Phenanthrene	Below RL	µg/L	1.03		U
120-12-7	\$6340 ALL	Anthracene	Below RL	µg/L	1.03		U
319-86-8	\$6340 ALL	delta-BHC	Below RL	µg/L	5.15		U
298-00-0	\$6340 ALL	Methyl parathion	Below RL	µg/L	5.15		U
76-44-8	\$6340 ALL	Heptachlor	Below RL	µg/L	5.15		U
84-74-2	\$6340 ALL	Diethyl phthalate	Below RL	µg/L	5.15		U
56-38-2	\$6340 ALL	Parathion	Below RL	µg/L	5.15		U
56-57-5	\$6340 ALL	4-Nitroquinoline-1-oxide	Below RL	µg/L	5.15		U
309-00-2	\$6340 ALL	Aldrin	Below RL	µg/L	5.15		U
91-80-5	\$6340 ALL	Methapyrilene	Below RL	µg/L	5.15		U
465-73-6	\$6340 ALL	Isodrin	Below RL	µg/L	5.15		U
1024-57-3	\$6340 ALL	Heptachlor epoxide (beta)	Below RL	µg/L	5.15		U
28044-83-9	\$6340 ALL	Heptachlor epoxide (alpha)	Below RL	µg/L	5.15		U
206-44-0	\$6340 ALL	Fluoranthene	Below RL	µg/L	1.03		U
92-87-5	\$6340 ALL	Benzidene	Below RL	µg/L	5.15		U
129-00-0	\$6340 ALL	Pyrene	Below RL	µg/L	1.03		U
959-98-8	\$6340 ALL	Endosulfan I	Below RL	µg/L	5.15		U
72-55-9	\$6340 ALL	4,4'-DDE	Below RL	µg/L	5.15		U
60-57-1	\$6340 ALL	Dieldrin	Below RL	µg/L	5.15		U
60-11-7	\$6340 ALL	Dimethylaminoazobenzene	Below RL	µg/L	5.15		U
510-15-6	\$6340 ALL	Chlorobenzilate	Below RL	µg/L	5.15		U

<u>CAS NUM TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
72-20-8 \$6340 ALL	Endrin	Below RL $\mu\text{g/L}$	5.15		U
72-54-8 \$6340 ALL	4,4'-DDD	Below RL $\mu\text{g/L}$	5.15		U
33213-65-9 \$6340 ALL	Endosulfan II	Below RL $\mu\text{g/L}$	5.15		U
7421-93-4 \$6340 ALL	Endrin aldehyde	Below RL $\mu\text{g/L}$	5.15		U
52-85-7 \$6340 ALL	Famphur	Below RL $\mu\text{g/L}$	5.15		U
119-93-7 \$6340 ALL	3,3'-Dimethylbenzidine	Below RL $\mu\text{g/L}$	5.15		U
85-68-7 \$6340 ALL	Butyl benzyl phthalate	Below RL $\mu\text{g/L}$	5.15		U
103-23-1 \$6340 ALL	bis(2-Ethylhexyl) adipate	Below RL $\mu\text{g/L}$	5.15		U
143-50-0 \$6340 ALL	Kepone	Below RL $\mu\text{g/L}$	5.15		U
50-29-3 \$6340 ALL	4,4'-DDT	Below RL $\mu\text{g/L}$	5.15		U
1031-07-8 \$6340 ALL	Endosulfan sulfate	Below RL $\mu\text{g/L}$	5.15		U
53-96-3 \$6340 ALL	2-Acetylaminofluorene	Below RL $\mu\text{g/L}$	5.15		U
72-43-5 \$6340 ALL	Methoxychlor	Below RL $\mu\text{g/L}$	5.15		U
91-94-1 \$6340 ALL	3,3'-Dichlorobenzidine	Below RL $\mu\text{g/L}$	5.15		U
56-55-3 \$6340 ALL	Benz(a)anthracene	Below RL $\mu\text{g/L}$	1.03		U
117-81-7 \$6340 ALL	bis(2-Ethylhexyl) phthalate	Below RL $\mu\text{g/L}$	5.15		U
218-01-9 \$6340 ALL	Chrysene	Below RL $\mu\text{g/L}$	1.03		U
117-84-0 \$6340 ALL	Di-n-octyl phthalate	Below RL $\mu\text{g/L}$	5.15		U
57-97-6 \$6340 ALL	7,12-Dimethylbenz(a)anthracene	Below RL $\mu\text{g/L}$	1.03		U
205-99-2 \$6340 ALL	Benzo(b)fluoranthene	Below RL $\mu\text{g/L}$	1.03		U
207-08-9 \$6340 ALL	Benzo(k)fluoranthene	Below RL $\mu\text{g/L}$	1.03		U
50-32-8 \$6340 ALL	Benzo(s)pyrene	Below RL $\mu\text{g/L}$	1.03		U
56-49-5 \$6340 ALL	3-Methylcholanthrene	Below RL $\mu\text{g/L}$	5.15		U
193-39-5 \$6340 ALL	Indeno(1,2,3-cd)pyrene	Below RL $\mu\text{g/L}$	1.03		U
53-70-3 \$6340 ALL	Dibenz(a,h)anthracene	Below RL $\mu\text{g/L}$	1.03		U
191-24-2 \$6340 ALL	Benzo(g,h,i)perylene	Below RL $\mu\text{g/L}$	1.03		U
\$6340 ALL	Heptachlor epoxide	Below RL $\mu\text{g/L}$	5.15		U
18496-25-8 1440	Sulfide, Total	Below RL mg/L	0.40		
1340D	Solids, Total Dissolved		712 mg/L	20.0	

Data Quality Flag Description

J = Estimated Value
 K = Analyte in Trip Blank
 P = Improper Preservative
 U = Analyte Not Detected

Case Narrative

This sample was not received with an aliquot preserved with HNO3 for Metals analysis. An unpreserved aliquot was preserved after the sample was received with the proper preservative for Metals analysis and that aliquot was used for all Metals analysis.

This report has been prepared and reviewed by personnel within the Division of Environmental Services. It has been approved for release.

Report Format: DESFinal



Gleason L. Wheatley, Director



**ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

Ernie Fletcher
Governor

RECEIVED

APR 12 2005

Division of Environmental Services
Centralized Laboratory Facility
100 Sower Blvd., Ste. 104
Frankfort, Kentucky 40601-8272

LaJuana S. Wilcher
Secretary

DIVISION OF WASTE MANAGEMENT
IN WASTE APPRAISAL

Friday, April 08, 2005

Sample Number: AC01315

To: Division of Waste Management
14 Reilly Road
Frankfort, KY 40601
ATTN: Missy Jones

County: Clark
Collected By: Ben Marshall
Delivered By: Ben Marshall
Received By: Lee Ruggles
Sample Matrix: Water
Sample Identification: Leachate
Field ID:

Re: Winchester Municipal Landfill

Program Code: B90

AKGWA:

Facility: 025-0004

Date: 3/10/2005 Time: 14:10

Date: 03/11/05 Time: 09:45

Date: 03/11/05 Time: 09:45

Collection Method: Grab

REPORT OF ANALYSIS

CAS NUM	TESTCODE	CONSTITUENTS	RESULT	UNIT	RL	MDL	FLAG
	1000	Acidity	41.5	mg/L	2		
	1020	Alkalinity (as CaCO ₃)	1710	mg/L	5		
	2040	CBOD-5	4.01	mg/L	2		
16887-00-6	1100	Chloride	178	mg/L	5.0		
	1220	Hardness, Total (as CaCO ₃)	597	mg/L	1		
	1320	Solids, Total Suspended	304	mg/L	1.50		
14808-79-8	1420	Sulfate	32.2	mg/L	5		
7440-44-0	2260	Organic Carbon, Total	18.4	mg/L	0.25		
7664-41-7	2020	Ammonia (as N)	18.8	mg/L	0.20		
	2280	Total Kjeldhal Nitrogen	23.2	mg/L	0.20		
	2120	Nitrate/Nitrite (as N)	0.369	mg/L	0.020		
14797-65-0	2140	Nitrite (as N)	Canceled	mg/L	0.020		T
	7723-14-0	Phosphorus, Total	0.498	mg/L	0.010		
	7440-70-2	\$3120 MINCA Calcium	148	mg/L	0.150		
	7439-89-6	\$3120 MINCA Iron	47.3	mg/L	0.050		
	7439-95-4	\$3120 MINCA Magnesium	55.3	mg/L	0.500		
	7440-09-7	\$3120 MINCA Potassium	19.6	mg/L	0.150		
	7440-23-5	\$3120 MINCA Sodium	79.4	mg/L	0.100		
	7429-90-5	\$3130 CALC Aluminum	157	µg/L	3.0		
	7440-38-2	\$3130 CALC Arsenic	16.5	µg/L	0.5		
	7440-39-3	\$3130 CALC Barium	314	µg/L	0.2		
	7440-43-9	\$3130 CALC Cadmium	Below RL	µg/L	0.4		
	7440-47-3	\$3130 CALC Chromium	1.87	µg/L	0.2		
	7440-50-8	\$3130 CALC Copper	2.63	µg/L	0.5		
	7439-92-1	\$3130 CALC Lead	5.03	µg/L	1.0		
	7439-96-5	\$3130 CALC Manganese	5230	µg/L	0.5		
	7440-02-0	\$3130 CALC Nickel	21.0	µg/L	1.0		
	7782-49-2	\$3130 CALC Selenium	4.19	µg/L	0.8		

Sample Number: AC01315

Report Version 1

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<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
7440-22-4	\$3130 CALC	Silver	0.424	µg/L	0.4		
7440-66-6	\$3130 CALC	Zinc	15.4	µg/L	2.0		
7439-97-6	3340	Mercury	Below RL	µg/L	0.05		
75-71-8	\$6320 ALL	Dichlorodifluoromethane	0.475	µg/L	0.500	J	
74-87-3	\$6320 ALL	Chloromethane	Below RL	µg/L	0.500	U	
75-01-4	\$6320 ALL	Vinyl chloride	Below RL	µg/L	0.500	U	
74-83-9	\$6320 ALL	Bromomethane	Below RL	µg/L	0.500	U	
75-00-3	\$6320 ALL	Chloroethane	Below RL	µg/L	0.500	U	
75-69-4	\$6320 ALL	Trichlorofluoromethane	Below RL	µg/L	0.500	U	
60-29-7	\$6320 ALL	Diethyl ether	18.2	µg/L	1.00		
75-35-4	\$6320 ALL	1,1-Dichloroethene	Below RL	µg/L	0.500	U	
67-64-1	\$6320 ALL	Acetone	4.27	µg/L	1.00	K	
74-88-4	\$6320 ALL	Methyl iodide	Below RL	µg/L	1.00	U	
75-15-0	\$6320 ALL	Carbon disulfide	Below RL	µg/L	1.00	U	
107-05-1	\$6320 ALL	Allyl chloride	Below RL	µg/L	1.00	U	
75-09-2	\$6320 ALL	Dichloromethane (Methylene chloride)	Below RL	µg/L	0.500	U	
107-13-1	\$6320 ALL	Acrylonitrile	Below RL	µg/L	1.00	U	
156-60-5	\$6320 ALL	trans-1,2-Dichloroethene	Below RL	µg/L	0.500	U	
1634-04-4	\$6320 ALL	Methyl-tert-butyl ether (MTBE)	Below RL	µg/L	1.00	U	
75-34-3	\$6320 ALL	1,1-Dichloroethane	Below RL	µg/L	0.500	U	
108-05-4	\$6320 ALL	Vinyl acetate	Below RL	µg/L	1.00	U	
594-20-7	\$6320 ALL	2,2-Dichloropropane	Below RL	µg/L	0.500	U	
156-59-2	\$6320 ALL	cis-1,2-Dichloroethene	0.584	µg/L	0.500	U	
78-93-3	\$6320 ALL	2-Butanone (MEK)	Below RL	µg/L	1.00	U	
107-12-0	\$6320 ALL	Propionitrile	Below RL	µg/L	2.00	U	
96-33-3	\$6320 ALL	Methyl acrylate	Below RL	µg/L	1.00	U	
126-98-7	\$6320 ALL	Methacrylonitrile	Below RL	µg/L	1.00	U	
74-97-5	\$6320 ALL	Bromochloromethane	Below RL	µg/L	0.500	U	
109-99-9	\$6320 ALL	Tetrahydrofuran	6.76	µg/L	1.00		
67-66-3	\$6320 ALL	Chloroform	Below RL	µg/L	0.500	U	
71-55-6	\$6320 ALL	1,1,1-Trichloroethane	Below RL	µg/L	0.500	U	
109-69-3	\$6320 ALL	1-Chlorobutane	Below RL	µg/L	1.00	U	
56-23-5	\$6320 ALL	Carbon tetrachloride	Below RL	µg/L	0.500	U	
563-58-6	\$6320 ALL	1,1-Dichloropropene	Below RL	µg/L	0.500	U	
71-43-2	\$6320 ALL	Benzene	0.829	µg/L	0.500		
107-06-2	\$6320 ALL	1,2-Dichloroethane	Below RL	µg/L	0.500	U	
79-01-6	\$6320 ALL	Trichloroethene	Below RL	µg/L	0.500	U	
78-87-5	\$6320 ALL	1,2-Dichloropropane	Below RL	µg/L	0.500	U	
74-95-3	\$6320 ALL	Dibromomethane	Below RL	µg/L	0.500	U	
80-62-6	\$6320 ALL	Methyl methacrylate	Below RL	µg/L	1.00	U	
75-27-4	\$6320 ALL	Bromodichloromethane	Below RL	µg/L	0.500	U	
79-46-9	\$6320 ALL	2-Nitropropane	Below RL	µg/L	1.00	U	
107-14-2	\$6320 ALL	Chloroacetonitrile	Below RL	µg/L	10.0	U	
10061-01-5	\$6320 ALL	cis-1,3-Dichloropropene	Below RL	µg/L	0.500	U	
108-10-1	\$6320 ALL	4-Methyl-2-pentanone (MIBK)	Below RL	µg/L	1.00	U	
108-88-3	\$6320 ALL	Toluene	Below RL	µg/L	0.500	U	
10061-02-6	\$6320 ALL	trans-1,3-Dichloropropene	Below RL	µg/L	0.500	U	
97-63-2	\$6320 ALL	Ethyl methacrylate	Below RL	µg/L	1.00	U	
79-00-5	\$6320 ALL	1,1,2-Trichloroethane	Below RL	µg/L	0.500	U	
127-18-4	\$6320 ALL	Tetrachloroethene	Below RL	µg/L	0.500	U	
591-78-6	\$6320 ALL	2-Hexanone (Methyl butyl ketone)	Below RL	µg/L	1.00	U	
124-48-1	\$6320 ALL	Dibromochloromethane	Below RL	µg/L	0.500	U	

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
106-93-4	\$6320	ALL	1,2-Dibromoethane (EDB)	Below RL	µg/L	0.500	U
142-28-9	\$6320	ALL	1,3-Dichloropropane	Below RL	µg/L	0.500	U
108-90-7	\$6320	ALL	Chlorobenzene		3.45 µg/L	0.500	
630-20-6	\$6320	ALL	1,1,1,2-Tetrachloroethane	Below RL	µg/L	0.500	U
544-10-5	\$6320	ALL	1-Chlorohexane	Below RL	µg/L	0.500	U
100-41-4	\$6320	ALL	Ethylbenzene	Below RL	µg/L	0.500	U
	\$6320	ALL		Below RL	µg/L	0.500	U
95-47-6	\$6320	ALL	1,3-Xylene & 1,4-Xylene	Below RL	µg/L	0.500	U
100-42-5	\$6320	ALL	1,2-Xylene	Below RL	µg/L	0.500	U
75-25-2	\$6320	ALL	Styrene	Below RL	µg/L	0.500	U
98-82-8	\$6320	ALL	Bromoform	Below RL	µg/L	0.500	U
108-86-1	\$6320	ALL	Isopropylbenzene (Cumene)		1.75 µg/L	0.500	
96-18-4	\$6320	ALL	Bromobenzene	Below RL	µg/L	0.500	U
79-34-5	\$6320	ALL	1,2,3-Trichloropropane	Below RL	µg/L	0.500	U
110-57-6	\$6320	ALL	1,1,2,2-Tetrachloroethane	Below RL	µg/L	0.500	U
103-65-1	\$6320	ALL	trans-1,4-Dichloro-2-butene	Below RL	µg/L	1.00	U
	\$6320	ALL	n-Propylbenzene	Below RL	µg/L	0.500	U
95-49-8	\$6320	ALL	2-Chlorotoluene	Below RL	µg/L	0.500	U
108-41-8	\$6320	ALL	3-Chlorotoluene	Below RL	µg/L	0.500	U
106-43-4	\$6320	ALL	4-Chlorotoluene	Below RL	µg/L	0.500	U
108-67-8	\$6320	ALL	1,3,5-Trimethylbenzene	Below RL	µg/L	0.500	U
76-01-7	\$6320	ALL	Pentachloroethane	Below RL	µg/L	1.00	U
98-06-6	\$6320	ALL	tert-Butylbenzene	Below RL	µg/L	0.500	U
95-63-6	\$6320	ALL	1,2,4-Trimethylbenzene	Below RL	µg/L	0.500	U
135-98-8	\$6320	ALL	sec-Butylbenzene	Below RL	µg/L	0.500	U
541-73-1	\$6320	ALL	1,3-Dichlorobenzene	Below RL	µg/L	0.500	U
99-87-6	\$6320	ALL	p-Isopropyltoluene (Cymene)	Below RL	µg/L	0.500	U
106-46-7	\$6320	ALL	1,4-Dichlorobenzene		2.21 µg/L	0.500	
95-50-1	\$6320	ALL	1,2-Dichlorobenzene	Below RL	µg/L	0.500	U
104-51-8	\$6320	ALL	n-Butylbenzene	Below RL	µg/L	0.500	U
67-72-1	\$6320	ALL	Hexachloroethane	Below RL	µg/L	1.00	U
96-12-8	\$6320	ALL	1,2-Dibromo-3-chloropropane	Below RL	µg/L	0.500	U
98-95-3	\$6320	ALL	Nitrobenzene	Below RL	µg/L	10.0	U
120-82-1	\$6320	ALL	1,2,4-Trichlorobenzene	Below RL	µg/L	0.500	U
87-68-3	\$6320	ALL	Hexachlorobutadiene	Below RL	µg/L	0.500	U
91-20-3	\$6320	ALL	Naphthalene	Below RL	µg/L	0.500	U
87-61-6	\$6320	ALL	1,2,3-Trichlorobenzene	Below RL	µg/L	0.500	U
	\$6320	ALL	Total Trihalomethanes	Below RL	µg/L	0.5	U
1330-20-7	\$6320	ALL	Total Xylenes	Below RL	µg/L	0.5	U
62-75-9	\$6340	ALL	N-Nitrosodimethylamine	Below RL	µg/L	5.15	U
110-86-1	\$6340	ALL	Pyridine	Below RL	µg/L	5.15	U
109-06-8	\$6340	ALL	2-Picoline	Below RL	µg/L	5.15	U
10595-95-6	\$6340	ALL	N-Nitrosomethylalkylamine	Below RL	µg/L	5.15	U
66-27-3	\$6340	ALL	Methyl methanesulfonate	Below RL	µg/L	5.15	U
55-18-5	\$6340	ALL	N-Nitrosodiethylamine	Below RL	µg/L	5.15	U
62-50-0	\$6340	ALL	Ethyl methanesulfonate	Below RL	µg/L	5.15	U
108-95-2	\$6340	ALL	Phenol	Below RL	µg/L	5.15	U
62-53-3	\$6340	ALL	Aniline		2.47 µg/L	5.15	J
76-01-7	\$6340	ALL	Pentachloroethane	Below RL	µg/L	5.15	U
111-44-4	\$6340	ALL	bis(2-Chloroethyl) ether	Below RL	µg/L	5.15	U
95-57-8	\$6340	ALL	2-Chlorophenol	Below RL	µg/L	5.15	U
541-73-1	\$6340	ALL	1,3-Dichlorobenzene	Below RL	µg/L	5.15	U
106-46-7	\$6340	ALL	1,4-Dichlorobenzene	Below RL	µg/L	5.15	U

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
100-51-6	\$6340	ALL	Benzyl alcohol	Below RL	µg/L	5.15	U
95-50-1	\$6340	ALL	1,2-Dichlorobenzene	Below RL	µg/L	5.15	U
95-48-7	\$6340	ALL	2-Methylphenol	Below RL	µg/L	5.15	U
108-60-1	\$6340	ALL	bis(2-Chloro-1-methylethyl) ether	Below RL	µg/L	5.15	U
930-55-2	\$6340	ALL	N-Nitrosopyrrolidine	Below RL	µg/L	5.15	U
	\$6340	ALL	3-Methylphenol & 4-Methylphenol	Below RL	µg/L	5.15	U
98-86-2	\$6340	ALL	Acetophenone	Below RL	µg/L	5.15	U
621-64-7	\$6340	ALL	N-Nitrosodi-n-propylamine	Below RL	µg/L	5.15	U
59-89-2	\$6340	ALL	N-Nitrosomorpholine	Below RL	µg/L	5.15	U
95-53-4	\$6340	ALL	o-Toluidine	Below RL	µg/L	5.15	U
67-72-1	\$6340	ALL	Hexachloroethane	Below RL	µg/L	5.15	U
98-95-3	\$6340	ALL	Nitrobenzene	Below RL	µg/L	5.15	U
100-75-4	\$6340	ALL	N-Nitrosopiperidine	Below RL	µg/L	5.15	U
78-59-1	\$6340	ALL	Isophorone	Below RL	µg/L	5.15	U
88-75-5	\$6340	ALL	2-Nitrophenol	Below RL	µg/L	5.15	U
105-67-9	\$6340	ALL	2,4-Dimethylphenol	Below RL	µg/L	5.15	U
126-68-1	\$6340	ALL	O,O,O-Triethyl phosphorothioate	Below RL	µg/L	5.15	U
65-85-0	\$6340	ALL	Benzoic acid	Below RL	µg/L	5.15	U
111-91-1	\$6340	ALL	bis(2-Chloroethoxy)methane	Below RL	µg/L	5.15	U
120-83-2	\$6340	ALL	2,4-Dichlorophenol	Below RL	µg/L	5.15	U
120-82-1	\$6340	ALL	1,2,4-Trichlorobenzene	Below RL	µg/L	5.15	U
91-20-3	\$6340	ALL	Naphthalene	Below RL	µg/L	1.03	U
106-47-8	\$6340	ALL	4-Chloroaniline	Below RL	µg/L	5.15	U
87-65-0	\$6340	ALL	2,6-Dichlorophenol	Below RL	µg/L	5.15	U
1888-71-7	\$6340	ALL	Hexachloropropene	Below RL	µg/L	5.15	U
87-68-3	\$6340	ALL	Hexachlorobutadiene	Below RL	µg/L	5.15	U
924-16-3	\$6340	ALL	N-Nitrosodibutylamine	Below RL	µg/L	5.15	U
59-50-7	\$6340	ALL	4-Chloro-3-methylphenol	Below RL	µg/L	5.15	U
120-58-1	\$6340	ALL	Isosafrole	Below RL	µg/L	5.15	U
91-57-6	\$6340	ALL	2-Methylnaphthalene	Below RL	µg/L	1.03	U
77-47-4	\$6340	ALL	Hexachlorocyclopentadiene	Below RL	µg/L	5.15	U
95-94-3	\$6340	ALL	1,2,4,5-Tetrachlorobenzene	Below RL	µg/L	5.15	U
88-06-2	\$6340	ALL	2,4,6-Trichlorophenol	Below RL	µg/L	5.15	U
95-95-4	\$6340	ALL	2,4,5-Trichlorophenol	Below RL	µg/L	5.15	U
94-59-7	\$6340	ALL	Safrole	Below RL	µg/L	5.15	U
91-58-7	\$6340	ALL	2-Chloronaphthalene	Below RL	µg/L	5.15	U
88-74-4	\$6340	ALL	2-Nitroaniline	Below RL	µg/L	5.15	U
130-15-4	\$6340	ALL	1,4-Naphthoquinone	Below RL	µg/L	5.15	U
131-11-3	\$6340	ALL	Dimethyl phthalate	Below RL	µg/L	5.15	U
99-65-0	\$6340	ALL	1,3-Dinitrobenzene	Below RL	µg/L	5.15	U
606-20-2	\$6340	ALL	2,6-Dinitrotoluene	Below RL	µg/L	5.15	U
208-96-8	\$6340	ALL	Acenaphthylene	Below RL	µg/L	1.03	U
99-09-2	\$6340	ALL	3-Nitroaniline	Below RL	µg/L	5.15	U
83-32-9	\$6340	ALL	Acenaphthene	Below RL	µg/L	1.03	U
51-28-5	\$6340	ALL	2,4-Dinitrophenol	Below RL	µg/L	5.15	U
100-02-7	\$6340	ALL	4-Nitrophenol	Below RL	µg/L	5.15	U
608-93-5	\$6340	ALL	Pentachlorobenzene	Below RL	µg/L	5.15	U
121-14-2	\$6340	ALL	2,4-Dinitrotoluene	Below RL	µg/L	5.15	U
132-64-9	\$6340	ALL	Dibenzofuran	Below RL	µg/L	5.15	U
91-59-8	\$6340	ALL	2-Naphthylamine	Below RL	µg/L	5.15	U
58-90-2	\$6340	ALL	2,3,4,6-Tetrachlorophenol	Below RL	µg/L	5.15	U
134-32-7	\$6340	ALL	1-Naphthylamine	Below RL	µg/L	5.15	U

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
84-66-2	\$6340 ALL	Diethyl phthalate	Below RL	µg/L	5.15	U	
7005-72-3	\$6340 ALL	4-Chlorophenyl phenyl ether	Below RL	µg/L	5.15	U	
86-73-7	\$6340 ALL	Fluorene	Below RL	µg/L	1.03	U	
297-97-2	\$6340 ALL	Thionazin	Below RL	µg/L	5.15	U	
100-01-6	\$6340 ALL	4-Nitroaniline	Below RL	µg/L	5.15	U	
99-55-8	\$6340 ALL	5-Nitro-o-toluidine	Below RL	µg/L	5.15	U	
534-52-1	\$6340 ALL	4,6-Dinitro-2-methylphenol	Below RL	µg/L	5.15	U	
86-30-6	\$6340 ALL	N-Nitrosodiphenylamine		13.5 µg/L	5.15	X	
3689-24-5	\$6340 ALL	Sulfotep	Below RL	µg/L	5.15	U	
99-35-4	\$6340 ALL	1,3,5-Trinitrobenzene	Below RL	µg/L	5.15	U	
2303-16-4	\$6340 ALL	Diallate (trans)	Below RL	µg/L	5.15	U	
298-02-2	\$6340 ALL	Phorate	Below RL	µg/L	5.15	U	
62-44-2	\$6340 ALL	Phenacetin	Below RL	µg/L	5.15	U	
2303-16-4	\$6340 ALL	Diallate (cis)	Below RL	µg/L	5.15	U	
101-55-3	\$6340 ALL	4-Bromophenyl phenyl ether	Below RL	µg/L	5.15	U	
319-84-6	\$6340 ALL	alpha-BHC	Below RL	µg/L	5.15	U	
118-74-1	\$6340 ALL	Hexachlorobenzene	Below RL	µg/L	5.15	U	
60-51-5	\$6340 ALL	Dimethoate	Below RL	µg/L	5.15	U	
319-85-7	\$6340 ALL	beta-BHC	Below RL	µg/L	5.15	U	
92-67-1	\$6340 ALL	4-Aminobiphenyl	Below RL	µg/L	5.15	U	
87-86-5	\$6340 ALL	Pentachlorophenol	Below RL	µg/L	5.15	U	
82-68-8	\$6340 ALL	Pentachloronitrobenzene	Below RL	µg/L	5.15	U	
23950-58-5	\$6340 ALL	Pronamide	Below RL	µg/L	5.15	U	
58-89-9	\$6340 ALL	gamma-BHC (Lindane)	Below RL	µg/L	5.15	U	
88-85-7	\$6340 ALL	Dinoseb	Below RL	µg/L	5.15	U	
298-04-4	\$6340 ALL	Disulfoton	Below RL	µg/L	5.15	U	
85-01-8	\$6340 ALL	Phenanthrene	Below RL	µg/L	1.03	U	
120-12-7	\$6340 ALL	Anthracene	Below RL	µg/L	1.03	U	
319-86-8	\$6340 ALL	delta-BHC	Below RL	µg/L	5.15	U	
298-00-0	\$6340 ALL	Methyl parathion	Below RL	µg/L	5.15	U	
76-44-8	\$6340 ALL	Heptachlor	Below RL	µg/L	5.15	U	
84-74-2	\$6340 ALL	Dibutyl phthalate	Below RL	µg/L	5.15	U	
56-38-2	\$6340 ALL	Parathion	Below RL	µg/L	5.15	U	
56-57-5	\$6340 ALL	4-Nitroquinoline-1-oxide	Below RL	µg/L	5.15	U	
309-00-2	\$6340 ALL	Aldrin	Below RL	µg/L	5.15	U	
91-80-5	\$6340 ALL	Methapyrilene	Below RL	µg/L	5.15	U	
465-73-6	\$6340 ALL	Isodrin	Below RL	µg/L	5.15	U	
1024-57-3	\$6340 ALL	Heptachlor epoxide (beta)	Below RL	µg/L	5.15	U	
28044-83-9	\$6340 ALL	Heptachlor epoxide (alpha)	Below RL	µg/L	5.15	U	
206-44-0	\$6340 ALL	Fluoranthene	Below RL	µg/L	1.03	U	
92-87-5	\$6340 ALL	Benzidene	Below RL	µg/L	5.15	U	
129-00-0	\$6340 ALL	Pyrene	Below RL	µg/L	1.03	U	
959-98-8	\$6340 ALL	Endosulfan I	Below RL	µg/L	5.15	U	
72-55-9	\$6340 ALL	4,4'-DDE	Below RL	µg/L	5.15	U	
60-57-1	\$6340 ALL	Dieldrin	Below RL	µg/L	5.15	U	
60-11-7	\$6340 ALL	Dimethylaminoazobenzene	Below RL	µg/L	5.15	U	
510-15-6	\$6340 ALL	Chlorobenzilate	Below RL	µg/L	5.15	U	
72-20-8	\$6340 ALL	Endrin	Below RL	µg/L	5.15	U	
72-54-8	\$6340 ALL	4,4'-DDD	Below RL	µg/L	5.15	U	
33213-65-9	\$6340 ALL	Endosulfan II	Below RL	µg/L	5.15	U	
7421-93-4	\$6340 ALL	Endrin aldehyde	Below RL	µg/L	5.15	U	
52-85-7	\$6340 ALL	Famphur	Below RL	µg/L	5.15	U	

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
119-93-7	\$6340 ALL	3,3'-Dimethylbenzidine	Below RL	µg/L	5.15		U
85-68-7	\$6340 ALL	Butyl benzyl phthalate	Below RL	µg/L	5.15		U
103-23-1	\$6340 ALL	bis(2-Ethylhexyl) adipate	Below RL	µg/L	5.15		U
143-50-0	\$6340 ALL	Kepone	Below RL	µg/L	5.15		U
50-29-3	\$6340 ALL	4,4'-DDT	Below RL	µg/L	5.15		U
1031-07-8	\$6340 ALL	Endosulfan sulfate	Below RL	µg/L	5.15		U
53-96-3	\$6340 ALL	2-Acetylaminofluorene	Below RL	µg/L	5.15		U
72-43-5	\$6340 ALL	Methoxychlor	Below RL	µg/L	5.15		U
91-94-1	\$6340 ALL	3,3'-Dichlorobenzidine	Below RL	µg/L	5.15		U
56-55-3	\$6340 ALL	Benz(a)anthracene	Below RL	µg/L	1.03		U
117-81-7	\$6340 ALL	bis(2-Ethylhexyl) phthalate	Below RL	µg/L	5.15		U
218-01-9	\$6340 ALL	Chrysene	Below RL	µg/L	1.03		U
117-84-0	\$6340 ALL	Di-n-octyl phthalate	Below RL	µg/L	5.15		U
57-97-6	\$6340 ALL	7,12-Dimethylbenz(a)anthracene	Below RL	µg/L	1.03		U
205-99-2	\$6340 ALL	Benzo(b)fluoranthene	Below RL	µg/L	1.03		U
207-08-9	\$6340 ALL	Benzo(k)fluoranthene	Below RL	µg/L	1.03		U
50-32-8	\$6340 ALL	Benzo(a)pyrene	Below RL	µg/L	1.03		U
56-49-5	\$6340 ALL	3-Methylcholanthrene	Below RL	µg/L	5.15		U
193-39-5	\$6340 ALL	Indeno(1,2,3-cd)pyrene	Below RL	µg/L	1.03		U
53-70-3	\$6340 ALL	Dibenz(a,h)anthracene	Below RL	µg/L	1.03		U
191-24-2	\$6340 ALL	Benzo(g,h,i)perylene	Below RL	µg/L	1.03		U
	\$6340 ALL	Heptachlor epoxide	Below RL	µg/L	5.15		U
18496-25-8	1440	Sulfide, Total	Below RL	mg/L	0.40		
	1340D	Solids, Total Dissolved		896 mg/L	20.0		
7440-70-2	\$3120D MIN	Calcium, Dissolved		137 mg/L	0.150		
7439-89-6	\$3120D MIN	Iron, Dissolved		36.8 mg/L	0.050		
7439-95-4	\$3120D MIN	Magnesium, Dissolved		53.2 mg/L	0.500		
7440-09-7	\$3120D MIN	Potassium, Dissolved		19.1 mg/L	0.150		
7440-23-5	\$3120D MIN	Sodium, Dissolved		77.3 mg/L	0.100		
7429-90-5	\$3130D	Aluminum, Dissolved		72.4 µg/L	3.0		
7440-38-2	\$3130D	Arsenic, Dissolved		7.04 µg/L	0.5		
7440-39-3	\$3130D	Barium, Dissolved		216 µg/L	0.2		
7440-43-9	\$3130D	Cadmium, Dissolved		Below RL µg/L	0.4		
7440-47-3	\$3130D	Chromium, Dissolved		1.07 µg/L	0.2		
7440-50-8	\$3130D	Copper, Dissolved		7.43 µg/L	0.5		
7439-92-1	\$3130D	Lead, Dissolved		2.02 µg/L	1.0		
7439-96-5	\$3130D	Manganese, Dissolved		3260 µg/L	0.5		
7440-02-0	\$3130D	Nickel, Dissolved		16.7 µg/L	1.0		
7782-49-2	\$3130D	Selenium, Dissolved		4.08 µg/L	0.8		
7440-22-4	\$3130D	Silver, Dissolved		4.05 µg/L	0.4		
7440-66-6	\$3130D	Zinc, Dissolved		78.8 µg/L	2.0		

<u>CAS NUM</u>	<u>TESTCODE</u>	<u>CONSTITUENTS</u>	<u>RESULT</u>	<u>UNIT</u>	<u>RL</u>	<u>MDL</u>	<u>FLAG</u>
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Data Quality Flag Description

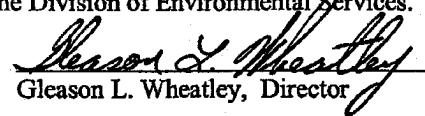
J = Estimated Value
K = Analyte in Trip Blank
T = Exceeded Holding Time
U = Analyte Not Detected
X = See Case Narrative

Case Narrative

Analyzed as Diphenylamine

This report has been prepared and reviewed by personnel within the Division of Environmental Services. It has been approved for release.

Report Format: DESFinal


Gleason L. Wheatley, Director



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NREPC/Division of Waste Mgmt
Attn: Danny Anderson
14 Reilly Road
Frankfort KY 40601

Batch #: 06011670
Received: 01/19/2006
Reported: 02/14/2006
Client: KY3875
Page: 16 of 21

Analysis Report

AE29280 Leachate Winchester Landfill Collected: 1/19/2006

Test Description	Analyzed	By	Method	Result	Units	Report Limit	Note
Hardness as CaCO ₃	01/23/2006	JLT	EPA 130.2	485	mg/l	1	
Tot. Suspended Solids	01/26/2006	LW	EPA 160.2	30	mg/l	1	
Bromide	01/20/2006	TEZ	EPA 300.0	3.3	mg/l	0.2	
Nitrate as N	01/20/2006	TEZ	EPA 300.0	0.84	mg/l	0.1	
Acidity	01/23/2006	DK	EPA 305.1	1 U	mg/l	1	
Ammonia as N	01/26/2006	AT	EPA 350.3	13	mg/l	1.0	
Total Kjeldahl Nitrogen	01/24/2006	DK	EPA 351.2	13.9	mg/l	1	
Phosphorus	01/26/2006	DK	EPA 365.2	3.7	mg/l	0.1	
Chemical Oxygen Demand	01/26/2006	DK	EPA 410.4	109	mg/l	5	
Magnesium - Solid Waste/Liquid	01/26/2006	FAM	EPA 6010	32.4	mg/l	0.01	
Antimony - Dissolved	01/24/2006	JEB	EPA 6020	0.002 U	mg/l	0.002	
Beryllium - Dissolved	01/24/2006	JEB	EPA 6020	0.002 U	mg/l	0.002	
Cobalt - Dissolved	01/24/2006	JEB	EPA 6020	0.002	mg/l	0.002	
Nickel - Dissolved	01/24/2006	JEB	EPA 6020	0.011	mg/l	0.002	
Thallium - Dissolved	01/24/2006	JEB	EPA 6020	0.002 U	mg/l	0.002	
Vanadium- Dissolved	01/24/2006	JEB	EPA 6020	0.002 U	mg/l	0.002	
4,4'-DDD	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
4,4'-DDE	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
4,4'-DDT	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Aldrin	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Alpha-BHC	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Alpha-Chlordane	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Arochlor 1016	01/25/2006	RCW	EPA 8081	0.00013 U	mg/l	0.00013	
Arochlor 1221	01/25/2006	RCW	EPA 8081	0.00013 U	mg/l	0.00013	
Arochlor 1232	01/25/2006	RCW	EPA 8081	0.00013 U	mg/l	0.00013	
Arochlor 1242	01/25/2006	RCW	EPA 8081	0.00013 U	mg/l	0.00013	
Arochlor 1248	01/25/2006	RCW	EPA 8081	0.00013 U	mg/l	0.00013	
Arochlor 1254	01/25/2006	RCW	EPA 8081	0.00013 U	mg/l	0.00013	
Arochlor 1260	01/25/2006	RCW	EPA 8081	0.00013 U	mg/l	0.00013	
Beta-BHC	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Delta-BHC	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Dieldrin	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Endosulfan I	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Endosulfan II	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Endosulfan Sulfate	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Endrin	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Endrin Aldehyde	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Endrin Ketone	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Gamma-BHC	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Gamma-Chlordane	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	



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Frankfort KY 40601

Batch #: 06011670
Received: 01/19/2006
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Analysis Report

AE29280 Leachate Winchester Landfill Collected: 1/19/2006

Test Description	Analyzed	By	Method	Result	Units	Report Limit	Note
Heptachlor	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Heptachlor Epoxide	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Methoxychlor	01/27/2006	RCW	EPA 8081	1.1 U	ug/l	1.1	
Toxaphene	01/27/2006	RCW	EPA 8081	6.7 U	ug/l	6.7	
Alkalinity, Bicarbonate (HCO3)	01/23/2006	JLT	SM 2320 B	450	mg/l	1	
Alkalinity, Carbonate (CO3)	01/24/2006	JT	SM 2320 B	1 U	mg/l	1	
Alkalinity, Tot(CaCO3)	01/23/2006	JLT	SM 2320 B	450	mg/l	1	
Total Dissolved Solids	01/23/2006	AMB	SM 2540	610	mg/l	1	
Biochemical Oxygen Demand, 5 Day	01/20/2006	GLH	SM 5210	23	mg/l	2	
Time of Analysis, BOD	01/20/2006	GLH	SM 5210	1630	hr/min		
Fecal Coliform, (MF)	01/20/2006	GLH	SM 9222-D	10 U	#/100 mls	10	
Time of Analysis, Fecal	01/20/2006	GLH	SM 9222-D	1645	hr/min		
Calcium - Solid Waste/Liquid	01/26/2006	FAM	SW 6010	122	mg/l	0.005	
Iron SWLiquid/Diss	01/26/2006	FAM	SW 6010	0.005 U	mg/l	0.005	
Sodium -Solid Waste/Liquid	01/26/2006	FAM	SW 6010	40.3	mg/l	0.005	
Total Iron (ICP) Solid Waste-Liquid	01/26/2006	FAM	SW 6010	45.7	mg/l	0.005	
Antimony -Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	
Arsenic - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.008	mg/l	0.002	
Barium - Dissolved Solid Waste/Liquid	01/24/2006	JEB	SW 6020	0.151	mg/l	0.002	
Barium -Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.181	mg/l	0.002	
Beryllium (ICP) Solid Waste-Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	
Cadmium - Dissolved Solid Waste/Liquid	01/24/2006	JEB	SW 6020	0.002 U	mg/l	0.002	
Cadmium - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	
Chromium - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.003	mg/l	0.002	
Chromium Diss-Solid Waste/Liquid	01/24/2006	JEB	SW 6020	0.002 U	mg/l	0.002	
Cobalt - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.004	mg/l	0.002	
Copper - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	
Lead - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	
Lead Diss-Solid Waste/Liquid	01/24/2006	JEB	SW 6020	0.002 U	mg/l	0.002	
Manganese - Solid Waste/Liquid	01/26/2006	FAM	SW 6020	2.83	mg/l	0.005	
Mercury - Dissolved Solid Waste/Liquid	01/24/2006	JEB	SW 6020	0.0002 U	mg/l	0.0002	
Mercury- Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.0002 U	mg/l	0.0002	
Nickel - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.012	mg/l	0.002	
Potassium -Solid Waste/Liquid	01/24/2006	FAM	SW 6020	7.94	mg/l	0.01	
Selenium - Dissolved Solid Waste/Liquid	01/24/2006	JEB	SW 6020	0.002	mg/l	0.002	
Selenium - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	
Silver - Dissolved Solid Waste/Liquid	01/25/2006	JEB	SW 6020	0.002 U	mg/l	0.002	
Silver - Solid Waste/Liquid	01/26/2006	FAM	SW 6020	0.002	mg/l	0.002	
Sodium-SWLiquid/Diss	01/24/2006	JEB	SW 6020	38.7	mg/l	0.005	
Thallium - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	



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AE29280 Leachate Winchester Landfill Collected: 1/19/2006

Test Description	Analyzed	By	Method	Result	Units	Report Limit	Note
Total Phosphorus - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.354	mg/l	0.1	
Vanadium - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.002 U	mg/l	0.002	
Zinc - Solid Waste/Liquid	01/24/2006	FAM	SW 6020	0.011	mg/l	0.005	
Extraction Pesticide	01/24/2006	REE	SW3520	1/24/06			
Extraction Semi-Volatile	01/25/2006	REE	SW3520	1/25/06			
1,2,3,5-Tetrachlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1,2,4,5-Tetrachlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1,2,4-Trichlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1,2-Dichlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1,3-Dichlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1,3-Dinitrobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1,4-Dichlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1,4-Naphthoquinone	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1-Naphthylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
1-Nitrosopyrrolidine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,2'-oxybis(1-Chloropropane)	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,3,4,6-Tetrachlorophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,3-Dichloroaniline	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,4,5-Trichlorophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,4,6-Trichlorophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,4-Dichlorophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,4-Dimethylphenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,4-Dinitrophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,4-Dinitrotoluene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,6-Dichlorophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2,6-Dinitrotoluene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Acetylaminofluorene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Chloronaphthalene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Chlorophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Methylnaphthalene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Methylphenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Naphthylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Nitroaniline	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Nitrophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
2-Picoline	01/30/2006	RSW	SW8270	10 U	ug/l	10	
3,3'-Dichlorobenzidine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
3,3'-Dimethylbenzidine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
3-Methylcholanthrene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
3-Methylphenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
3-Nitroaniline	01/30/2006	RSW	SW8270	10 U	ug/l	10	



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AE29280 Leachate Winchester Landfill Collected: 1/19/2006

Test Description	Analyzed	By	Method	Result	Units	Report Limit	Note
4,6-Dinitro-2-methylphenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Aminobiphenyl	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Bromophenyl-phenylether	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Chloro-3-methylphenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Chloroaniline	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Chlorophenyl-phenylether	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Methylphenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Nitroaniline	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Nitrophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Nitroquinoline-1-oxide	01/30/2006	RSW	SW8270	10 U	ug/l	10	
4-Nitrosomorpholine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
5-Nitro-o-toluidine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
7,12-Dimethylbenz(a)anthracene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
a,a-Dimethyl phenethylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Acenaphthene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Acenaphthylene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Acetophenone	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Aniline	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Anthracene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Aramite	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Benzo(a)anthracene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Benzo(a)pyrene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Benzo(b)fluoranthene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Benzo(g,h,i)perylene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Benzo(k)fluoranthene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Benzoic Acid	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Benzyl Alcohol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
bis(2-Chloroethoxy)methane	01/30/2006	RSW	SW8270	10 U	ug/l	10	
bis(2-Chloroethyl)ether	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Bis(2-ethylhexyl)phthalate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Butylbenzylphthalate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Chlorobenzilate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Chrysene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Diallate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Dibenz(a,h)anthracene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Dibenzofuran	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Diethylphthalate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Dimethoate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Dimethylphthalate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Di-n-butylphthalate	01/30/2006	RSW	SW8270	10 U	ug/l	10	



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Di-n-octylphthalate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Dinoseb	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Diphenylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Disulfoton	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Ethyl Methanesulfonate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Famfur	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Fluoranthene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Fluorene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Hexachlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Hexachlorobutadiene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Hexachlorocyclopentadiene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Hexachloroethane	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Hexachlorophene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Hexachloropropene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Indeno(1,2,3-cd)pyrene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Isodrin	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Isophorone	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Isosafrole	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Kepone	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Methapyrilene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Methyl Methanesulfonate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Methyl parathion	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Naphthalene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Nitrobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
N-Nitrosodiethylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
N-Nitrosodimethylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
N-Nitroso-di-n-butylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
N-Nitroso-di-n-propylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
N-Nitrosodiphenylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
N-Nitrosomethylalkylamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
N-Nitrosopiperidine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
O,O,O-Triethyl phosphorothioat	01/30/2006	RSW	SW8270	10 U	ug/l	10	
o-Toluidine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Parathion	01/30/2006	RSW	SW8270	10 U	ug/l	10	
p-Dimethylaminocazobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Pentachlorobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Pentachloroethane	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Pentachloronitrobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Pentachlorophenol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Phenacetin	01/30/2006	RSW	SW8270	10 U	ug/l	10	



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Phenanthrene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Phénol	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Phorate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
p-Phenylenediamine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Pronamide	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Pyrene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Pyridine	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Safrole	01/30/2006	RSW	SW8270	10 U	ug/l	10	
sym-Trinitrobenzene	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Tetraethyl dithiopyrophosphate	01/30/2006	RSW	SW8270	10 U	ug/l	10	
Thionazin	01/30/2006	RSW	SW8270	10 U	ug/l	10	

Sample Qualifier Legend

U - Non-detected at the reported detect limit.

Submitted By:


Doug Wolfe, Director of Laboratory Services

The analyses reported above have been determined by protocols that meet or exceed the requirements of NELAC. Methods listed with an *** are not part of this accreditation. Call Doug Wolfe at 270-821-7375 for any questions concerning this analysis report.



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SAMPLE ACCEPTANCE/CONDITION CHECKLIST

Client: DWM Logbatch No.: 0011670 Lab No.: AE 29277-280

Sample Delivery Type (circle): US Postal UPS FedEx MMLI Client _____

Sample Receipt Checklist:

- | | YES | NO |
|---|-------|-------|
| a. Were custody seals used on outer package, and/or sample containers? | _____ | / |
| b. Were sample containers received damaged? | _____ | / |
| c. Cooler Temp <u>No Fee</u> (circle) Acceptable <u>Unacceptable</u> | _____ | / |
| d. Were the samples accompanied with a Chain-of-Custody or other transferable document? | / | _____ |
| e. Was all information recorded to defend the sample transfer & submittal? | / | _____ |
| f. Is each sample and container uniquely identified on the COC? | / | _____ |
| g. Were all samples in appropriate containers? | / | _____ |
| h. Did all samples have appropriate volumes? | / | _____ |
| i. Were all samples submitted within sample holding times? | / | _____ |

Logged In By: DJS

Date: 1-20-06

Exceptions:

Action Required:

Client Informed on ____ / ____ / ____ Client Rep: _____ By: _____
 No Action Required, see notes
 No Action Required

Reviewed By: _____ Project Manager Date: ____ / ____ / ____

Attachment 3

- Summary of Leachate Analytical Results
- Summary of Outfall #002 Monitoring Results
- Estimated Quantity of Metals Discharged to Pond 2

Summary of Leachate Analytical Results
Winchester Municipal Utilities/OCC Landfill
Winchester, Kentucky

Analyte	Unit	Leachate	Leachate	Leachate	Maximum Daily Value		Long-Term Avg. Value		No.of Analyses
		2/10/2005	3/10/2005	1/19/2006	Concentration	Mass	Concentration	Mass	
CBOD-5	mg/L	4.74	4.01	23	23.00	1.92	10.58	0.88	3
Chemical Oxygen Demand	mg/L	-	-	109	109	9	109	9	1
Organic Carbon, Total	mg/L	9.45	18.4	-	18.4	1.5	13.9	1.2	2
Solids, Total Suspended	mg/L	184	304	30	304	25	173	14	3
Solids, Total Dissolved	mg/L	712	896	610	896	74.7	739.3	61.6	2
Ammonia (as N)	mg/L	13	18.8	13	18.8	1.6	14.9	1.2	3
Bromide	mg/L	NM	NM	3.3	3.3	0.3	3.3	0.3	1
Chloride	mg/L	109	178	-	178	15	144	12	2
Fluoride									
Hardness, Total (As CaCO ₃)	mg/L	579	597	485	597	50	554	46	3
Nitrate/Nitrite (as N)	mg/L	1.41	0.369	0.84	1.41	0.12	0.87	0.07	3
Nitrite (as N)	mg/L	< 0.025	Cancelled		0.000	0.000	0.000	0.000	1
Total Kjeldhal Nitrogen	mg/L	10.3	23.2	13.9	23.2	1.9	15.8	1.3	3
Phosphorus, Total	mg/L	1.98	0.498	3.7	3.70	0.31	2.06	0.17	3
Acidity	mg/L	44.4	41.5	<1	44	3.7	29	2.4	3
Alkalinity	mg/L	556	1710	450	1710	142.5	905.3	75.4	3
Sulfate	mg/L	33.9	32.2		33.9	2.8	33.1	2.8	2
Sulfide, Total	mg/L	< 0.40	< 0.40		-	-	-	-	2
Aluminum	μg/L	246	157		246	21	202	17	2
Barium	μg/L	480	314	181	480	40	325	27	3
Cobalt	μg/L	8.86	NM	4	8.86	0.74	6.43	0.54	2
Iron	mg/L	219	47.3	45.7	219	18	104	9	3
Magnesium	mg/L	43	55.3	32.4	55	5	44	4	3
Molybdenum	μg/L	< 1.0	NM		-	-	-	-	1
Manganese	μg/L	5750	5230	2830	5750	479	4603	384	3
Antimony	μg/L	< 1.0	NM	<0.002	-	-	-	-	2
Arsenic	μg/L	19.1	16.5	8	19.1	1.6	14.5	1.2	3
Beryllium	μg/L	< 1.0	NM	<2	-	-	-	-	2
Cadmium	μg/L	0.716	< 0.4	<2	0.72	0.06	0.72	0.06	3
Chromium	μg/L	1.79	1.87	3.000	3.00	0.25	2.22	0.19	3
Copper	μg/L	3.51	2.63	<2	3.51	0.29	3.07	0.26	3
Lead	μg/L	8.22	5.03	<2	8.22	0.69	6.63	0.55	3
Mercury	μg/L	NM	< 0.05	<2	-	-	-	-	3
Nickel	μg/L	19	21	12	21	2	17	1	3
Selenium	μg/L	3.13	4.19	<2	4.19	0.35	3.7	0.3	3
Silver	μg/L	0.636	0.424	2	2	0.166667	1.0	0.1	3
Thallium	μg/L	< 1.0	NM	<2	1	0.08	1	0.08	2
Zinc	μg/L	23.6	15.4	11	23.6	2.0	16.7	1.4	3
Vanadium	μg/L	2.92	NM	<2	2.92	0.24	2.92	0.24	2
Potassium	mg/L	13.6	19.6	7.94	20	2	14	1	3
Sodium	mg/L	52.7	79.4		79	7	66	6	2
Calcium	mg/L	161	148	122	161	13	144	12	3
Calcium, Dissolved	mg/L	129	137	<0.002	137	11.4	133.0	11.1	3
Antimony, Dissolved	mg/L			<0.002	0	0.0	0.0	0.0	2
Beryllium, Dissolved	mg/L			<0.002	0	0.0	0.0	0.0	1
Iron, Dissolved	mg/L	< 0.050	36.8		36.8	3.1	36.8	3.1	2
Magnesium, Dissolved	mg/L	42.6	53.2		53.2	4.4	47.9	4.0	2
Potassium, Dissolved	mg/L	15.3	19.1		19.1	1.6	17.2	1.4	2
Sodium, Dissolved	mg/L	61.5	77.3	38.7	77.3	6.4	59.2	4.9	3
Aluminum, Dissolved	μg/L	< 3.0	72.4		72.4	6.0	72.4	6.0	2
Arsenic, Dissolved	μg/L	1.48	7.04		7.04	0.6	4.3	0.4	2
Barium, Dissolved	μg/L	108	216	151	216	18.0	158.3	13.2	3
Cadmium, Dissolved	μg/L	< 0.4	< 0.4	<0.002	-	-	-	-	3
Chromium, Dissolved	μg/L	0.414	1.07	<0.002	1.07	0.1	0.7	0.1	3
Cobalt, Dissolved	mg/L			<0.002	0	0.0	0.0	0.0	1
Copper, Dissolved	μg/L	1.23	7.43		7.43	0.6	4.3	0.4	2
Lead, Dissolved	μg/L	< 1.0	2.02	<2	2.02	0.2	2.0	0.2	3
Manganese, Dissolved	μg/L	3440	3260		3440	286.7	3350.0	279.2	2
Nickel, Dissolved	μg/L	14	16.7	0.011	16.7	1.4	10.2	0.9	3
Selenium, Dissolved	μg/L	3.5	4.08	2	4.08	0.3	3.2	0.3	3
Thallium, Dissolved	mg/L			<0.002	0	0.0	0.0	0.0	1
Vanadium, Dissolved	mg/L			<0.002	0	0.0	0.0	0.0	1
Silver, Dissolved	μg/L	0.565	4.05	<0.002	4.05	0.3	2.3	0.2	3
Zinc, Dissolved	μg/L	3.34	78.8		78.8	6.6	41.1	3.4	2

Summary of Leachate Analytical Results
Winchester Municipal Utilities/OCC Landfill
Winchester, Kentucky

Analyte	Unit	Leachate	Leachate	Leachate	Maximum Daily Value		Long-Term Avg. Value		No.of Analyses
		2/10/2005	3/10/2005	1/19/2006	Concentration	Mass	Concentration	Mass	
Mercury, Dissolved	µg/L	< 0.05	NM	<0.002	-	-	-	-	2
Arochlor 1016	mg/L			<0.00013	-	-	-	-	3
Arochlor 1221	mg/L			<0.00013	-	-	-	-	3
Arochlor 1232	mg/L			<0.00013	-	-	-	-	3
Arochlor 1242	mg/L			<0.00013	-	-	-	-	3
Arochlor 1248	mg/L			<0.00013	-	-	-	-	3
Arochlor 1254	mg/L			<0.00013	-	-	-	-	3
Arochlor 1260	mg/L			<0.00013	-	-	-	-	3
Dichlorodifluoromethane	µg/L	< 0.500	0.475		0.48	0.04	0.48	0.04	2
Chloromethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Vinyl chloride	µg/L	< 0.500	< 0.500		-	-	-	-	2
Bromomethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Chloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Trichlorofluoromethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Diethyl ether	µg/L	13.4	18.2		18.2	1.5	15.8	1.3	2
1,1-Dichloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Acetone	µg/L	3.02	4.27		4.27	0.36	3.65	0.30	2
Methyl iodide	µg/L	< 1.0	< 1.0		-	-	-	-	2
Carbon disulfide	µg/L	< 1.0	< 1.0		-	-	-	-	2
Allyl chloride	µg/L	< 1.0	< 1.0		-	-	-	-	2
Dichloromethane (Methylene chloride)	µg/L	< 0.500	< 0.500		-	-	-	-	2
Acrylonitrile	µg/L	< 1.0	< 1.0		-	-	-	-	2
trans-1,2-Dichloroethene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Methyl-tert-butyl ether (MTBE)	µg/L	< 1.0	< 1.0		-	-	-	-	2
1,1-Dichloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Vinyl acetate	µg/L	< 1.0	< 1.0		-	-	-	-	2
2,2-Dichloropropane	µg/L	< 0.500	< 0.500		-	-	-	-	2
cis-1,2-Dichloroethene	µg/L	0.462	0.584		0.584	0.05	0.52	0.04	2
2-Butanone (MEK)	µg/L	< 1.0	< 1.0		-	-	-	-	2
Propionitrile	µg/L	< 2.0	< 2.0		-	-	-	-	2
Methyl acrylate	µg/L	< 1.0	< 1.0		-	-	-	-	2
Methacrylonitrile	µg/L	< 1.0	< 1.0		-	-	-	-	2
Bromochloromethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Tetrahydrofuran	µg/L	4.89	6.76		6.76	0.56	5.8	0.5	2
Chloroform	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,1,1-Trichloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
1-Chlorobutane	µg/L	< 1.0	< 1.0		-	-	-	-	2
Carbon tetrachloride	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,1-Dichloropropene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Benzene	µg/L	0.447	0.829		0.829	0.07	0.6	0.1	2
1,2-Dichloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Trichloroethene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,2-Dichloropropane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Dibromomethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Methyl methacrylate	µg/L	< 1.0	< 1.0		-	-	-	-	2
Bromodichloromethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
2-Nitropropane	µg/L	< 1.0	< 1.0		-	-	-	-	2
Chloroacetonitrile	µg/L	< 10.0	< 10.0		-	-	-	-	2
cis-1,3-Dichloropropene	µg/L	< 0.500	< 0.500		-	-	-	-	2
4-Methyl-2-pentanone (MIBK)	µg/L	< 1.0	< 1.0		-	-	-	-	2
Toluene	µg/L	< 0.500	< 0.500		-	-	-	-	2
trans-1,3-Dichloropropene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Ethyl methacrylate	µg/L	< 1.0	< 1.0		-	-	-	-	2
1,1,2-Trichloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Tetrachloroethene	µg/L	< 0.500	< 0.500		-	-	-	-	2
2-Hexanone (Methyl butyl ketone)	µg/L	< 1.0	< 1.0		-	-	-	-	2
Dibromochloromethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,2-Dibromoethane (EDB)	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,3-Dichloropropane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Chlorobenzene	µg/L	1.52	3.45		3.45	0.29	2.5	0.2	2
1,1,2-Tetrachloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
1-Chlorohexane	µg/L	< 0.500	< 0.500		-	-	-	-	2

Summary of Leachate Analytical Results
Winchester Municipal Utilities/OCC Landfill
Winchester, Kentucky

Analyte	Unit	Leachate	Leachate	Leachate	Maximum Daily Value		Long-Term Avg. Value		No.of Analyses
		2/10/2005	3/10/2005	1/19/2006	Concentration	Mass	Concentration	Mass	
Ethylbenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,3-Xylene & 1,4-Xylene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,2-Xylene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Styrene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Bromoform	µg/L	< 0.500	< 0.500		-	-	-	-	2
Isopropylbenzene (Cumene)	µg/L	0.521	1.75		1.75	0.15	1.1	0.1	2
Bromobenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,2,3-Trichloropropane	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,1,2,2-Tetrachloroethane	µg/L	< 0.500	< 0.500		-	-	-	-	2
trans-1,4-Dichloro-2-butene	µg/L	< 1.0	< 1.0		-	-	-	-	2
n-Propylbenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
2-Chlorotoluene	µg/L	< 0.500	< 0.500		-	-	-	-	2
3-Chlorotoluene	µg/L	< 0.500	< 0.500		-	-	-	-	2
4-Chlorotoluene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,3,5-Trimethylbenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Pentachloroethane	µg/L	< 1.0	< 1.0		-	-	-	-	2
tert-Butylbenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,2,4-Trimethylbenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
sec-Butylbenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,3-Dichlorobenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
p-Isopropyltoluene (Cymene)	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,4-Dichlorobenzene	µg/L	0.63	2.21		2.21	0.18	1.4	0.1	2
1,2-Dichlorobenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
n-Butylbenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Hexachloroethane	µg/L	< 1.0	< 1.0		-	-	-	-	2
1,2-Dibromo-3-chloropropane	µg/L	< 0.500	< 0.500		-	-	-	-	2
Nitrobenzene	µg/L	< 10.0	< 10.0		-	-	-	-	2
1,2,4-Trichlorobenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Hexachlorobutadiene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Naphthalene	µg/L	< 0.500	< 0.500		-	-	-	-	2
1,2,3-Trichlorobenzene	µg/L	< 0.500	< 0.500		-	-	-	-	2
Total Trihalomethanes	µg/L	< 0.5	< 0.5		-	-	-	-	2
Total Xylenes	µg/L	< 0.5	< 0.5		-	-	-	-	2
N-Nitrosodimethylamine	µg/L	< 5.15	< 5.15		-	-	-	-	2
Pyridine	µg/L	< 5.15	< 5.15		-	-	-	-	2
2-Picoline	µg/L	< 5.15	< 5.15		-	-	-	-	2
N-Nitrosomethylethylamine	µg/L	< 5.15	< 5.15		-	-	-	-	2
Methyl methanesulfonate	µg/L	< 5.15	< 5.15		-	-	-	-	2
N-Nitrosodiethylamine	µg/L	< 5.15	< 5.15		-	-	-	-	2
Ethyl methanesulfonate	µg/L	< 5.15	< 5.15		-	-	-	-	2
Phenol	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
Aniline	µg/L	< 5.15	2.47	< 10	2.47	0.21	2.5	0.2	3
Pentachloroethane	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
bis(2-Chloroethyl) ether	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
2-Chlorophenol	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
1,3-Dichlorobenzene	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
1,4-Dichlorobenzene	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
Benzyl alcohol	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
1,2-Dichlorobenzene	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
2-Methyphenol	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
bis-(2-Chloro-1-methylethyl) ether	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
N-Nitrosopyrrolidine	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
3-Methyphenol & 4-Methyphenol	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
Acetophenone	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
N-Nitrosodi-n-propylamine	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
N-Nitrosomorpholine	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
o-Toluidine	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
Hexachloroethane	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
Nitrobenzene	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
N-Nitrosopiperidine	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
Isophorone	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
2-Nitrophenol	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3
2,4-Dimethylphenol	µg/L	< 5.15	< 5.15	< 10	-	-	-	-	3

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Winchester, Kentucky

Analyte	Unit	Leachate	Leachate	Leachate	Maximum Daily Value		Long-Term Avg. Value		No.of Analyses
		2/10/2005	3/10/2005	1/19/2006	Concentration	Mass	Concentration	Mass	
O,O,O-Triethyl phosphorothioate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Benzoic acid	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
bis(2-Chloroethoxy) methane	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2,4-Dichlorophenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
1,2,4-Trichlorobenzene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Naphthalene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
4-Chloroaniline	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2,6-Dichlorophenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Hexachloropropene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Hexachlorobutadiene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
N-Nitrosodibutylamine	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
4-Chloro-3-methylphenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Isosafrole	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2-Methylnaphthalene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Hevachlorocyclopentadiene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
1,2,4,5-Tetrachlorobenzene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2,4,6-Trichlorophenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2,4,5-Trichlorophenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Safrole	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2-Chloronaphthalene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2-Nitroaniline	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
1,4-Naphthoquinone	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Dimethyl phthalate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
1,3-Dinitrobenzene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2,6-Dinitrotoluene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Acenaphthylene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
3-Nitroaniline	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Acenaphthene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
2,4-Dinitrophenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
4-Nitrophenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Pentachlorobenzene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2,4-Dinitrotoluene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Dibenzofuran	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2-Naphthylamine	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
2,3,4,6-Terachlorophenol	µg/L	NM	< 5.15	<10	-	-	-	-	3
1-Naphthylamine	µg/L	NM	< 5.15	<10	-	-	-	-	3
Diethyl phthalate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
4-Chlorophenyl phenyl ether	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Fluorene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Thionazin	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
4-Nitroaniline	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
5-Nitro-o-toluidine	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
4,6-Dinitro-2-methylphenol	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
N-Nitrosodiphenylamine	µg/L	8.58	13.5	<10	13.5	1.13	11.0	0.9	2
Sulfoteppe	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
1,3,5-Trinitrobenzene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Diallate (trans)	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Phorate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Phenacetin	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Diallate (cis)	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
4-Bromophenyl phenyl ether	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Dibutyl phthalate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Parathion	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
4-Nitroquinoline-1-oxide	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Methyl parathion	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Methapyrilene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Isodrin	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Dimethylaminoazobenzene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Chlorobenzilate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Famphur	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
3,3'-Dimethylbenzidine	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Butyl benzyl phthalate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
bis(2-Ethylhexyl) adipate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Kepone	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2

Summary of Leachate Analytical Results
Winchester Municipal Utilities/OCC Landfill
Winchester, Kentucky

Analyte	Unit	Leachate	Leachate	Leachate	Maximum Daily Value		Long-Term Avg. Value		No.of Analyses
		2/10/2005	3/10/2005	1/19/2006	Concentration	Mass	Concentration	Mass	
2-Acetylaminofluorene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
3,3'Dichlorobenzidine	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
bis(2-Ethylhexyl) phthalate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Di-n-octyl phthalate	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
7,12-Dimethylbenz(a)anthracene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	2
3-Methylcholanthrene	µg/L	<5.15	< 5.15	<10	-	-	-	-	2
Heptachlor epoxide	µg/L	< 5.15	< 5.15	<10	-	-	-	-	2
Aldrin	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
alpha-BHC	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
beta-BHC	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
gamma-BHC (Lindane)	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
delta-BHC	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
alpha-Chlordane	µg/L			<1.1	-	-	-	-	1
4,4'-DDT	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
4,4'-DDE	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
4,4'-DDD	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Dieldrin	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Endosulfane I	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Endosulfan II	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Endrin	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Endosulfan sulfate	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Endrin aldehyde	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Endrin ketone	µg/L			<1.1	-	-	-	-	1
Heptachlor	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Heptachlor epoxide	µg/L			<1.1	-	-	-	-	1
Heptachlor epoxide (beta)	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Heptachlor epoxide (alpha)	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Methoxychlor	µg/L	< 5.15	< 5.15	<1.1	-	-	-	-	3
Hexachlorobenzene	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Dimethoate	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
4-Aminobiphenyl	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Pentachlorophenol	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Pentachloronitrobenzene	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Pronamide	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Dinoseb	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Disulfoton	µg/L	< 5.15	< 5.15	-	-	-	-	-	2
Benz(a)anthracene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Benzo(b)fluoranthene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Benzo(k)fluoranthene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Benzo(a)pyrene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Phenanthrene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Anthracene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Fluoranthene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Benzidene	µg/L	< 5.15	< 5.15	<10	-	-	-	-	3
Pyrene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Indeno(1,2,3-cd)pyrene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Diben(a,h)anthracene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Benzo(g,h,i)perylene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3
Chrysene	µg/L	< 1.03	< 1.03	<10	-	-	-	-	3

Winchester Municipal Utilities Landfill
Surface Water Monitoring
KPDES Pond 002

WMU Landfill: KPDES Pond 002

Date	Flow MGD	Chloride mg/L	Sulfate mg/L	BOD, 5 day unheated mg/L	Sp. Cond. umhos/cm	Hardness mg/L	pH BU	TOC mg/L	TSS mg/L	Ag mg/L	As mg/L
1/17/2000	0										
2/3/2000	0										
3/10/2000	0										
4/7/2000	0										
4/24/2000	0										
5/4/2000	0										
6/19/2000	0										
7/24/2000	0										
8/10/2000	0.004	8	16	8	190	98	7.2	13	12	0.01	0.05
9/7/2000	0										
10/27/2000	0										
11/8/2000	0										
12/11/2000	0										
1/25/2001	0										
2/23/2001	0.001	13	54	39	380	170	7.7	5.4	4	0.01	0.05
3/9/2001	0										
5/21/2001	0										
6/11/2001	0										
6/29/2001	0										
7/13/2001	0										
8/10/2001	0										
9/13/2001	0										
10/18/2001	0										
11/8/2001	0										
12/10/2001	0										
1/14/2002	0										
2/28/2002	0										
3/19/2002	0										
4/24/2002	0										
5/22/2002	0										
6/8/2002	0										
7/12/2002	0										
8/16/2002	0										
9/18/2002	0										
10/25/2002	0.0014	8.98	28		257	134	7.88	6.88	3		0.01
11/19/2002	0.0432	5.55	21	1	221		7.58	6.29	3		
12/13/2002	0.004	7.05	28	2	313		8.04	5.8	3		
Detect Limit#	0.000	1	1.0	1.0	1	1	0.1	0.5	3.0	0.01	0.05
Maximum	0.048	27.0	98	89	460	200	8.04	13.0	162	0.01	0.05
Average	0.002	10.8	32	7.4	268	136	7.43	6.4	39	0.01	0.03
Permit Limit							6.9	30/60			

Date	Be mg/L	Cd mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Hg mg/L	Na mg/L	Ni mg/L	Pb mg/L	Sb mg/L	Se mg/L	Tl mg/L	Zn mg/L
1/17/2000													
2/3/2000													
3/10/2000													
4/7/2000													
4/24/2000													
5/4/2000													
6/16/2000													
7/24/2000													
8/10/2000	0.002	0.005	0.01	0.005	0.62	0.0002	2	0.02	0.06	0.05	0.05	0.05	0.05
9/7/2000													
10/27/2000													
11/8/2000													
12/11/2000													
1/25/2001													
2/23/2001	0.002	0.005	0.01	0.005	0.34	0.0002	3.9	0.02	0.05	0.05	0.05	0.05	0.05
3/9/2001													
5/21/2001													
6/11/2001													
6/29/2001													
7/13/2001													
8/10/2001													
9/13/2001													
10/18/2001													
11/8/2001													
12/10/2001													
1/14/2002													
2/28/2002													
3/19/2002													
4/24/2002													
5/22/2002													
6/8/2002													
7/12/2002													
8/16/2002													
9/18/2002													
10/25/2002	0.002	0.002	0.005	0.005	0.102	0.0002	2.64	0.01	0.006	0.02	0.01	0.01	0.02
11/19/2002					0.197		2.18						
12/13/2002					0.328		2.42						
Detect Limit#	0.002	0.005	0.01	0.005	0.05	0.0002	2.0	0.02	0.060	0.05	0.05	0.05	0.05
Maximum	0.005	0.005	0.01	0.010	18.00	0.0005	4	0.02	0.060	0.05	0.05	0.05	0.10
Average	0.003	0.004	0.01	0.006	2.49	0.0003	2.7	0.02	0.028	0.04	0.03	0.04	0.05
Permit Limit													

Winchester Municipal Utilities Landfill
Surface Water Monitoring
KPDES Pond 002

WMU Landfill KPDES Pond 002

Date	Flow MGD	Chloride mg/L	Sulfate mg/L	BOD 5 day mg/L	Sp. Cond. umhos/cm	Hardness mg/L	pH SU	TOC mg/L	TSS mg/L	Ag mg/L	As mg/L
1/16/2003	0.000										
2/5/2003	0.009	9.47	35	2	220		7.9	6.37	16		
3/5/2003	0.001	4.64	30	1	227		8.11	2.92	6		
4/28/2003	0.000										
5/7/2003	0.086	2.33	10	2	395	81.4	7.37	8.81	10		0.01
6/3/2003	0.010	2.64	7.54	2	399		6.82	7.82	4		
7/1/2003	0.000										
8/15/2003	0.000										
9/3/2003	0.030	6.58	13	1	397		7.1	9.28	27		
10/30/2003	0.000										
11/19/2003	0.029	2.72	9.45	2	391	94	7.3	6.52	37		0.05
12/18/2003	0.007	18	21	2	317		7.13	4.46	5		
1/9/2004	0.004	4.02	16	2	297		7.14	6.3	8		
2/3/2004	0.014	4.22	12	2	315	82	6.9	6.7	24		0.05
3/12/2004	0.001	3.87	12	2	396		7.6	8.38	15		
4/14/2004	0.014	2.2	11	2	191	84	7.79	8.76	9.7		0.05
5/5/2004	0.001	1.64	7.38	2	147		7.61	10	3		
6/4/2004	0.004	2.67	6.28	2	211		7.82	6.33	4.7		
7/23/2004	0.001	3.36	5.19	196	228		7.43	7.92	17		
8/31/2004	0.000										
9/10/2004	0.007	5.61	11	2	291		7.25	5.37	17		
10/12/2004	0.000										
11/12/2004	0.021	4.06	11	2	160	111	7.47	9.09	12		
12/8/2004	0.069	3.91	34	2	330	125	7.22	8.16	8		
Permit Limit											
Detect Limit	0.0001	1.0	1.0	1	1	0.1	0.5	3.0	0.01	0.05	
Maximum	0.086	27.0	98	196	460	200	8.11	13.0	162	0.01	0.05
Average	0.004	6.9	21	11.3	282	114	7.42	7.0	28	0.01	0.04

Date	Be mg/L	Cr mg/L	Cl mg/L	Cu mg/L	Fe mg/L	Hg mg/L	Na mg/L	Ni mg/L	Pb mg/L	Sb mg/L	Se mg/L	Tl mg/L	Zn mg/L
1/16/2003						0.943		3.46					
2/5/2003						0.0357		2.98					
3/5/2003								1.9					
4/28/2003													
5/7/2003	0.002	0.002	0.005	0.005	0.42	0.0002	2.3	0.01	0.005	0.01	0.01	0.01	0.01
6/3/2003					0.548		2.55						
7/1/2003													
8/15/2003						3.64		3.3					
9/3/2003													
10/30/2003													
11/19/03	0.002	0.002	0.01	0.005	1.63	0.0002	2	0.02	0.05	0.05	0.05	0.05	0.05
12/18/2003					0.855		2.95						
1/9/2004					1.01		2.36						
2/3/2004	0.002	0.005	0.01	0.005	1.7	0.0002	2	0.02	0.05	0.05	0.05	0.05	0.05
3/12/2004					1.57		2.13						
4/14/2004	0.002	0.005	0.01	0.005	2.18	0.0002	2	0.02	0.05	0.05	0.05	0.05	0.05
5/5/2004					1.24		2.21						
6/4/2004					0.83		2.33						
7/23/2004					1.29		2						
8/31/2004					1.08		2.85						
9/10/2004													
10/12/2004					0.831		2						
11/12/2004					1.07		2						
12/8/2004													
Permit Limit	0.002	0.005	0.01	0.005	0.05	0.0002	2.0	0.02	0.050	0.05	0.05	0.05	0.05
Maximum	0.005	0.006	0.01	0.010	15.00	0.0005	4	0.02	0.050	0.05	0.05	0.05	0.10
Average	0.002	0.004	0.01	0.006	1.70	0.0002	2.5	0.02	0.030	0.04	0.04	0.04	0.06

NOTES:

- * Shaded values are below detection limits.
- * Boxed values exceed the permit limit.

Estimated Quantity of Metals Discharged per year to KPDES POND 002

Metal ID	Stormwater		Leachate		Total Quantity Discharged/year (mg)
	Average Conc. (mg/l)	Quantity Discharged/year (mg)	Average Conc. (mg/l)	Quantity Discharged/year (mg)	
Antimony	0.04	606	<0.001	-	606
Arsenic	0.04	606	0.014	530	1,136
Beryllium	0.002	30	<0.001	-	30
Cadmium	0.004	61	0.0007	26	87
Chromium	0.01	151	0.002	76	227
Copper	0.006	91	0.003	114	204
Lead	0.03	454	0.007	265	719
Mercury	0.002	30	<0.001	-	30
Nickel	0.02	303	0.017	643	946
Selenium	0.04	606	0.0037	140	746
Silver	0.01	151	0.0001	4	155
Thallium	0.04	606	<0.001	-	606
Zinc	0.05	757	0.0167	632	1,389
Iron	1.7	25,738	104	3,936,412	3,962,150

Notes:

The leachate concentration reported in this table are concentrations before treatment.